



A Weekly Journal of Pharmacy and the Drug-trade.

ESTABLISHED 1859.

Head Office: 42 Cannon Street, London, E.C.

Branch Offices	Melbourne, Vic. ..	Fink's Buildings, Elizabeth Street.
	Sydney, N.S.W. ..	114a Pitt Street.
	Adelaide, S.A. ..	76 Brookman's Building, Grenfell Street.

#### SUBSCRIPTION RATES.

Ten shillings a year in advance, post free to any part of the world, including a copy of THE CHEMISTS' AND DRUGGISTS' DIARY next published. Single copy, 4d.; Summer or Winter Number, 1s.; DIARY, 3s. 6d. Postal orders and cheques to be crossed "Martin's Bank (Limited)."

THIS JOURNAL is regularly supplied by subscription to the whole of the members of SIXTEEN PHARMACEUTICAL SOCIETIES in the British Empire. The associate Journal, *The Chemist and Druggist of Australasia*, published at Melbourne and Sydney, is also supplied to all Australasian subscribers.

Terms for advertising may be obtained on application to the Publisher, C. & D., 42 Cannon Street, London, E.C.

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#### THE CHEMISTS' AND DRUGGISTS' DIARY, 1904.

THIS work is presented free to all subscribers to THE CHEMIST AND DRUGGIST. In consequence of our exceptionally large colonial and foreign circulation the DIARY has to go to press comparatively early, so that the work may be printed, bound, despatched, and delivered to subscribers abroad before Christmas. Our DIARY is the most esteemed and valuable advertising-medium of the kind in the world. It is used all the year round as a buying aid by the best business men in the drug-trade. Advertisers should, therefore, be sure of getting space in it for their announcements by addressing

The Publisher of THE CHEMISTS' AND DRUGGISTS' DIARY,  
42 Cannon Street, London, E.C.

## Summary.

CASCARA SAGRADA is the feature of the week. Owing to heavy buying on account of American "bear" sellers, the price has gone up to 5l. a cwt. The circumstances are detailed in an article on p. 432.

SOME new non-labile labels are reprinted on p. 434.

SEVEN books of varied interest are reviewed on p. 449.

THE MITCHAM PEPPERMINT-CROP is very bad this year (p. 439).

HENRY HODDER & CO. (LIMITED) are issuing fresh shares (p. 424).

OUT of fifteen poisoning fatalities reported on p. 419 twelve were suicides.

KODAK (LIMITED) have obtained an injunction against a Mr. Dodd (p. 423).

A NEW "Attfield" has been published this week, and is described on p. 433.

A SUCCESSFUL CANDIDATE describes how to work for the London Minor (p. 438).

AGRICULTURAL CHEMISTS will find a useful note on bunt and smut in cereals on p. 435.

IBSEN, the dramatist, and erstwhile chemist's apprentice, is the subject of a note on p. 435.

A HERBALIST in Gateshead has been fined for infringing the Medicine-stamp Acts (p. 423).

A CURIOUS EXPLANATION for weak tr. iodi was given at Sheerness on Thursday (p. 444).

"HALL-MEN" are offered a striking certificate by the new Association. It is facsimiled on p. 430.

A GREAT DEAL of practical information is contained in the replies to correspondents on pp. 441-4.

SOME thoughtful observations on the apprentice-question are communicated by Mr. A. L. Taylor (p. 436).

A PORTRAIT of and some biographical notes respecting the late Mr. John Calderwood will be found on p. 450.

In some parts of France apprentices are not to be taken by pharmacists so that competition may be limited (p. 421).

THE nature of the New Zealand qualifying pharmaceutical examination is depicted in the examination papers on p. 427.

AN illustrated account of the Syrian Protestant College at Beyrout and its pharmacy department is printed on pp. 428-9.

THE CORRESPONDENCE this week deals with a variety of topics which merit the attention of retailers and wholesalers (p. 439).

Is the London Chamber of Commerce a private debating society? Mr. A. Zimmermann says "Aye"; Mr. T. Tyrer "No" (p. 434).

A LARGE number of replies on medicine-stamp questions are printed on p. 441, and further observations regarding our formulas scheme on p. 434.

A NEW scheme for the decoration of 17 Bloomsbury Square is proposed, and a design for an external fresco depicted by Mr. F. Reynolds on p. 430.

MESSRS. HEYNES, MATHEW & Co., of Cape Town, have successfully sued a customer for 336l., the value of goods supplied for an opening order (p. 422).

MR. R. M. HUNTER, a Philadelphia chemist, says he can turn silver into gold by carrying new theories about the atomic constitution into practice (p. 430).

WE report the annual meeting of the Deutscher Apotheker Verein held at Munich, when the grievances ventilated were almost British in character (p. 425).

MR. C. T. BENNETT finds lead in commercial acetic acid, and therefore in liq. ammon. acet. It passes the B.P. test. His paper on the subject will be found on p. 426.

SPLINTS, the ailment that affects the leg bones of horses, is described by "M.R.C.V.S." on p. 437, where also will be found notes on luxation of the patella in foals and tapeworms in lambs.

RATHER more activity is apparent on the markets this week. Cascara sagrada is considerably dearer, and among other articles that have advanced are cloves and clove oil, shellac, Newfoundland cod-liver oil, and copper sulphate. Peppermint oil, aniseed oil, ergot, and lycopodium are firmer. German refined camphor and cinnamon are lower. The auction of first-hand drugs is reported on p. 444.



## English News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

### Brevities.

At West Ham Police Court on September 1, William Henry Smith (63), described as a dispenser, was committed or trial on a charge of bigamy.

Mr. Andrew William Taylor, druggist, Woodborough Road, Nottingham, has been missing for nearly a fortnight. His business is a good one, and he was popular in the district.

At the Leeds City Police Court on August 27, Fairfax Fearnley, chemist and druggist, Shepherd's Lane, was fined 20s. and costs for having in his possession for use for trade an unjust scale.

The Confectioners', Bakers', and Allied Traders' Exhibition is to open at the Agricultural Hall, Islington, on August 5. Messrs. W. Gardner & Sons, engineers, Gloucester, are to have a large exhibit.

The winter session of the Manchester Pharmaceutical Association will begin in October. In November the annual dinner is to take place at the Albion Hotel, to be followed by a smoking-concert.

At Littlehampton (Sussex) on August 31, Mr. William Arthur Savill, chemist and druggist, Littlehampton and Bognor, was one of a number of persons summoned for the non-payment of the education rate.

At Marlborough Street Police Court on September 1, Henry Charles Newitt (24), clerk, was remanded on a charge of stealing 49l. 6s. 6d. from his employers, Messrs. Bailey & Co., perfumers, of 94 St. Martin's Lane, W.C.

The failures in the drug-trade last month were the heaviest for three years—viz., nine, as compared with six in 1902 and two in 1901. This was in England and Wales, and the numbers do not include deeds of arrangement.

During the removal of Messrs. Croyden & Co.'s stock from 45 to 55 Wigmore Street, W., a case containing Midgley's medicinal soaps and a lot of throat-sprays was stolen. Perhaps the thieves may be detected if they offer the goods to any in the trade.

Mr. John Lawrenson, formerly carrying on business as a chemist and druggist in Stretford Road, Manchester, is now doing well in agriculture in Canada. He has written to the St. Andrew's Lodge of Mark Masons, of which he was the Secretary, tendering his resignation, which has been accepted.

At the Bournemouth Police Court on August 25, Ernest Albert Hochen, of Palmerston Road, Boscombe, was summoned under the Sale of Food and Drugs Acts for selling sausage containing, according to the analyst's certificate, 72.8 gr. of boric acid per lb. An adjournment was granted in order that the third sample might be analysed.

At the Mansion House Police Court on August 28, James Dimmock (14), an errand-boy, was remanded on a charge of stealing twelve bottles of scent and one bottle of eucalyptus, of the value of 17s., the property of his employer—Mr. Frederick Boxall, chemist, 128 Fleet Street. The boy had been in the prosecutor's employment for eight days only.

An inquest was held at Hackney, on August 24, on the body of David King, described as a chemist's assistant, lately managing a chemist's shop in Bishop's Street, Poplar, who died in the infirmary, and a verdict of death from delirium tremens was given. The widow stated that her husband had a diploma as a chemist and druggist, but the name is not on the register.

At a meeting of the Yorkshire College of the Rosicrucian Society, held at Harrogate on August 29, Frater James Smith, Prov. Secretary (of Ilirst, Brooke & Ilirst, Limited, wholesale druggists, Leeds), was presented, on behalf of the members and officers, with a silver tea and coffee service on the occasion of his marriage. A case of silver-backed brushes was given to Mrs. Smith.

At the South-Western Police Court on August 27, the Magistrate had his attention drawn to a remanded case in which a boy named Alfred Ellis was charged with being concerned in breaking and entering 100 High Road, Balham, the business premises of Mr. Harry Foulds, chemist. The Magistrate had ordered the boy a week's detention at a remand-home for youths at Camberwell Green, but when the case was called on for hearing the Court was informed that Ellis had succeeded in escaping from his place of detention during the night.

### The Fraud of the Label.

Under this title the following paragraphs were published in the *Daily Mail* last Saturday:

A scheme has been formulated by a prominent patent-medicine vendor whereby the question of fraudulent substitution, which was fully dealt with recently in a series of articles in the *Daily Mail*, will shortly receive the attention of the trade association.

The idea is to arrange for regular advertisements to appear in the Press at the expense of legitimate traders calling the attention of the public to the fraud of the label. It is hoped ultimately to extend the working of the scheme so that all traders who suffer in this way shall join in and pay their share.

### Grimsby Chemists' Association.

A general meeting of this Association was held at the Oberon Hotel on Tuesday, September 1, Mr. T. Sneath in the chair. The Secretary read a circular from the Secretary of the Pharmaceutical Society about a proposed formula-compendium, and after some discussion it was resolved, *inter alia*, to send certain suggestions to the Secretary, and that members be left to individually send their formulas either to the Secretary of the Pharmaceutical Society or to the Editor of the *C. & D.* for insertion in the coming CHEMISTS' AND DRUGGISTS' DIARY. The meeting then held a friendly discussion on the alteration in the reading of the Medicine-stamp Acts.

### Warrant Withdrawn.

At the Bridlington Police Court, on August 29, Mr. H. J. Jackson, pharmaceutical chemist, Bridlington Quay, applied for permission to withdraw a warrant issued eight years ago for the arrest of a man named Miller, formerly an official of the Bridlington Recreation Grounds Company. He was suspected of having decamped with moneys belonging to the company. Mr. Jackson stated that the company had been dissolved and the books destroyed, so that proceedings could not now be taken against Miller. The warrant was withdrawn.

### Birmingham Notes.

Smallpox has at last been stamped out of Birmingham. The last two cases were discharged Friday last, leaving the hospital empty.

All members of the craft in business have been circularised re the chemists' and druggists' classes which are shortly to be started at the Technical School, under the directorship of Mr. Slator Price, D.Sc.

A new form of soda-water bottle, which necessitates new filling-machinery, has been invented by Messrs. Chavasse & Kerr, of this city. The stopper is in the form of a metal clasp, and wiring is dispensed with.

The manor of Aston having been raised to the dignity of a borough, after twenty-seven years' begging solicitation, will require a public analyst. Hitherto this work has been done by Dr. A. B. Hill, medical officer of health of the county of Warwick.

The Worcester hop-crop—as, indeed, all kinds of autumnal crops—are in such a poor state that the harvesting of them is causing grave anxiety. During the month of August over 6 inches of rainfall has been recorded, with the result that coughs, colds, asthma, difficulty of breathing, and the like have brought grist to the pharmacy mill.

The *Mail* reports an incident which happened in a chemist's shop in Corporation Street. Deep in discussion of the yacht-race, a customer, after paying and pocketing an article, continued the confab, and, when about to leave, picked up a packet of toilet-soap. The bulkiness of his pocket made the man look into its contents, and he went back to the shop with the surplus package.



After a death from *consumption*, the city authorities entered a villa residence and stripped all the paper off the walls, and, with a syringe-like apparatus, "disinfected" the place from top to bottom. The wearing-apparel and textile fabrics were removed to the official disinfector, and were subsequently returned in a scorched and more or less damaged state. All this was done by virtue of by-laws.

It is generally known that amongst traders where bottles form a large part of their stock-in-trade a mutual-exchange bureau is established, and each gets his own back. Such is the case with mineral-water-makers, brewers, and herb-beer makers. Why is it not so in pharmacy? There was to be seen at a brother-chip's, the other day, an assortment of good and clean bottles, and the names of almost every chemist in the town was "blown" on the bottle. Cannot the M.P.A. start a bureau?

#### Saccharin-smuggling.

George Enoch Skidmore, mineral-water manager, who was recently convicted at Wigan on a charge of smuggling 56 lbs. of saccharin and fined 336*l.*, or, in default, six months' imprisonment (see *C. & D.*, August 22, page 349), has been informed, through his solicitor, that the Commissioners of his Majesty's Customs have authorised his release on payment of 100*l.* Arrangements are being made for payment of that amount.

#### Sportive Pill-makers.

The annual sports in connection with the employés of Messrs. Arthur H. Cox & Co., pill and tablet manufacturers, Brighton, took place on August 29, at Wright's Farm, Race Hill, Brighton. It was a very successful function, there being foot-races, "three-legged-races," sack-races, a ladies' race, a tug of war, a cricket-match and other items, all of which were heartily competed for. The races were all under metric measurement, Mr. Cox being an advocate of the metric system.

#### Outings.

The members of the Stourbridge Board of Guardians held the first of what is expected to be their annual excursions to Malvern on August 26. The arrangements were made principally by Mr. F. W. Biggs, chemist and druggist, Stourbridge, who was Secretary, and to whom a special vote of thanks was tendered at the dinner held at the British Camp Hotel.

The last summer picnic of the members of the Cardiff and District Pharmaceutical Association took place at Barry Island on September 2. Unfortunately, the weather was very unpropitious, and of course militated against the attendance. It was impossible to make other than a cursory inspection of the huge docks immediately adjacent to the Bristol Channel or to view the other attractions of the place. The pharmaceutical members, or such of them as did not care to brave the elements, proceeded to the Ship Hotel, where a few hours were very pleasantly spent. After tea a brief but interesting discussion, initiated by Mr. A. Hagon, took place on the label-question in connection with the new reading of the Medicine-stamp Acts.

#### Sheffield Notes.

Dr. E. G. Annis, M.R.C.S., L.R.C.P., medical officer of health for Greenwich, has been appointed M.O.H. for Sheffield, in succession to Dr. John Robertson, at a salary of 700*l.* a year.

A representative of one of the firms of printers who make a speciality of chemists' labels, who has been in the town this week, has been complaining that orders are practically non-existent. Local pharmacists are all apparently sitting on the fence waiting to see the next development in the Medicine-stamp Acts difficulty.

Sheffield pharmacists are sharing the general trade-depression, and, in addition, are suffering from ills of their own. The execrable weather has killed the summer trade, and has adversely affected the business in photographic materials. In the industrial neighbourhoods business is particularly bad owing to the partial stoppage of most of the works where armour-plates and guns are the staple business.

#### Criquet.

Notts Chemists *v.* Post Office (A team).—The chemists secured a meritorious victory in this match, which was played on the Trent Bridge Ground, Nottingham, on August 29. Having made 127 runs for the loss of five wickets, they dismissed the Post Office team for 56, thus winning by five wickets and 71 runs.

#### The Week's Poisonings.

Fifteen deaths are reported from poisons during the week, three resulting from misadventure. Five suicides by carbolic took place. These were at Manchester (Maggie Tennison, 19, servant to a beerhouse-keeper), at Clerkenwell (Daniel Grande, 38, a coal-dealer), at Tabard Street, Borough, S.E. (Robert Holloway, 45, a Billingsgate porter), at Liverpool (Frederick McGeorge, 35, a clerk), and at Tooting (Thomas Tarrant, 14, a schoolboy, who had been reading pernicious literature). Three cases of oxalic-acid poisoning are recorded—at Southsea, where the victim was a labourer's wife, Emily Lambert; at Brompton, the victim being a potman named Saunders; and at Derby, where the poison was taken by Jessie Udale (17), a domestic servant. William Gardiner was found dying on his allotment at Lillington, near Leamington. He had taken some weed-killer, composed of arsenic and washing-soda, and a *post-mortem* showed arsenical poisoning to be the cause of death. A Hungarian, Jean Lendis, who lived at Mareham-le-Fen, near Horncastle, poisoned himself with laudanum. Lillie Fisher, aged two years and nine months, was playing in her parents' garden at Brierley Hill last week, and sucked the heads of some poppies that were in seed. She was found dead in bed next morning, the cause of death being asphyxia "either due to narcotic poisoning, such as opium, or to the vitiated atmosphere in which the child slept." Jane Watts, of Penmark, Glam., purchased "some liquid poison" from a chemist at Barry, with which she poisoned herself. At Gateshead, Mary Bartholomew (18) accidentally drank a quantity of liquid ammonia instead of water and died from asphyxia. A quartermaster of the Army Service Corps, Lieut. John Davies, was found dead in his bedroom at a Chester hotel. He left letters showing a depressed condition of mind, and a tumbler "containing the remains of an opaque fluid" was found near the body. The police surgeon thought Davies poisoned himself, but could not tell what the poison was. An inmate of the Wells Asylum, near Yeovil, ate some yew leaves and died from the effects.

## Irish News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

#### Tender for Drugs.

The Governors of the Monaghan Lunatic Asylum will consider tenders for the supply of medicines as per Local Government Board list at their meeting on September 17.

#### Personal.

Professor Tichborne left Dublin this week to attend the International Conference of Hygiene at Brussels. He is one of the delegates from the Royal Institute of Public Health of Great Britain and Ireland.

#### Carbolic-poisoning.

On August 23 a Dublin woman, named Kiernan, accidentally swallowed a quantity of carbolic acid which had been used for disinfecting-purposes, and which she mistook for porter. She died the same night, and a verdict of accidental death was returned at the Coroner's inquest.

#### A Dispensary without Medicine.

At the Baltinglass Guardians Mr. Kavanagh asked what was the reason that no medicine was kept in the Graney Dispensary, Castledermot. People, he said, were obliged to go to Baltinglass for medicine, and he thought it should be kept in the dispensary. The Clerk having said that question



could be put to the doctor, it was agreed to ask Dr. Cruise to explain.

#### Railway Rates.

At last week's meeting of the Council of the Cork Industrial Development Association, Mr. K. B. Williams drew attention to the high rates charged for the carriage of goods from one town in Munster to another, as compared with the through rates in force from Liverpool and other towns in England to places in the South of Ireland. This state of affairs, he said, placed the local manufacturer at a great disadvantage.

#### Accident to Belfast Traveller.

Mr. Maxwell Thompson, representative of Messrs. John Clarke & Co., wholesale druggists, Belfast, met with an accident on August 28. He was driving from Keady to Armagh, when his car came into collision with another vehicle, with the result that he was thrown to the ground and received a fractured ankle. Mr. Thompson was removed to the county infirmary, in Armagh, and is progressing favourably.

#### Ung. Hydrarg. Ammon.

The analyst has reported to the Longford Guardians that the ung. hydrarg. ammon. submitted to him for analysis gave 10 per cent. of white precipitate, and the fats melted at about 43 per cent. C, but the fluid portion of the ointment separated on standing, a friable mass resulting. It was, he added, an objectionable ointment, and not a "uniform plastic ointment as defined by the B.P." It was decided to request the contractor to substitute ointment of the proper standard for that complained of.

#### Cutting Consequences.

At the meeting of the Council of Irish Traders' Associations, held in Dublin last week, Alderman Ireland proposed a resolution deprecating the practice on the part of the wholesale merchants and manufacturers in accepting a composition arrangement from traders who fail in business through some fault of their own, and suggesting that in such cases the estate of the debtor should be converted into bankruptcy in the general interests of the trading community and of the public. The resolution was passed unanimously.

#### Irish Chemists' Assistants' and Apprentices' Association.

The committee of this Association met in the Gresham Hotel, Upper Sackville Street, on August 31, the President (Mr. E. B. Aplin) in the chair. Sub-committees, of five members each, were formed to look after the financial, executive, and entertainment departments of the Association. Mr. P. G. Creed was elected Hon. Secretary, *vice* Mr. Doyle, resigned. Arrangements were made to procure permanent meeting-rooms, and it was decided to hold an inaugural supper in the Gresham Hotel early in October. The preparation of rules was agreed to be left to the general meeting. Thirteen new members were elected.

#### Carbolic-soap Question.

At the last meeting of the Manorhamilton Board of Guardians Mr. Ward (Messrs. Ward & Co., Manorhamilton) appeared before the Guardians with reference to a complaint that the carbolic-soap which his firm had supplied was not up to the mark. Mr. Ward said he believed the public analyst was at fault when he said that there was only 1½ per cent. of carbolic acid in the soap, the standard being 5 per cent. Something was wrong, for he believed he was sending good carbolic soap. The manufacturers said they put as much carbolic acid into the soap as should make it acceptable. His contract was nearly up, and he did not know what to do, unless the Guardians allowed him to supply the small quantity that would be required to the end of his contract. It was decided to allow Mr. Ward to finish his contract.

**ARTIFICIAL PUMICE.**—A factory at Bietigheim, in the valley of the Enz, Prussia, has for some time been manufacturing an artificial pumice-stone from ground sandstone and clay. Ten different grades are made, each distinct from the other in regard to hardness and grain, and, of course, each is required for some particular purpose in manufacture.

## Scotch News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by this Editor.

#### Glasgow Notes.

Business has taken a turn for the better. This is due chiefly to the fact that the holiday season is almost over.

On August 27 a Glasgow commercial traveller, Alexander Wylie, committed suicide by drinking fourpennyworth of laudanum.

Methylated-spirit drinking, which seems to be reviving in other parts of the country, is now almost unknown in Glasgow.

It is reported that an ambitious project for planting a huge general store, including a drug-department, in a central thoroughfare is "off."

There is some talk amongst local public dispensers of a movement for an all-round increase of pay. It is said that Glasgow compares very unfavourably in this respect with other large centres.

In those districts in Glasgow where there is a Jewish colony quite a brisk trade is done in hay-saffron, which is sold by the half-ounce. It is used for colouring fish, bread, and other articles of food.

The landmarks of Old Glasgow are fast disappearing. To make room for the extension of St. Enoch's Station the last vestiges of the Barbers' Hall have just been removed. This building was historically associated with the Guild of Barber Surgeons, which figured prominently in the medical history of Glasgow.

The steam hospital-ship *Joseph and Sarah Miles* is on a visit to the Clyde. This vessel, which has been fitted up for service amongst the North Sea Fishing Fleet, is provided with special contrivances for nursing the injured at sea. It has all the modern appliances, such as the Röntgen-ray apparatus, and the dispensary is exceedingly compact and well appointed.

By a special act of grace the Town Council has resolved that in future medical men attending street-accidents shall be paid according to the circumstances. Hitherto the maximum fee has been the princely one of 2s. 6d. The hapless chemist will, of course, continue to give first aid and the hospitality of his shop to the invading multitude for pure love of humanity.

The date of Mr. J. H. Sutcliffe's lecture to the Glasgow Optical Society has been postponed from Monday, September 7, to Monday, September 14, at the Shepherd's Hall, 25 Bath Street, Glasgow. Mr. Sutcliffe will deal with the "Evil Eye." Cards of admission can be obtained from Mr. H. B. Doleman, 172 West Regent Street, Glasgow.

#### Northern Notes.

During his recent botanical ramble in the north of Scotland Mr. Claridge Druce, of Oxford, got about twenty new county records.

Mr. A. W. Henderson, chemist and druggist, 33 Rosemount Viaduct, Aberdeen, has branched out as a Scotch cod-liver oil merchant.

"The largest, best, and cheapest cash chemist" is said to be in the northern capital, but the advertiser does not say how large he is.

Nairn chemists who have double fronts to their premises make effective exhibits of the soothing herb and its appurtenances in one of them. The weed brings good business, too.

A dozen Winchester quart bottles of inf. gentiane c. conc., all together in a window, and placarded "One of the ingredients" of an indigestion-mixture, are used by an Inverness pharmacist with some effect.

Mr. A. R. Clark, chemist and druggist, Braemar, is now occupying the premises which he has had built on the bank of the river near his old premises. The foundation is solid rock, which took six weeks to blast before the desired level was obtained.



## French News.

(From our Paris Correspondent.)

**THE EMPRESS'S PERFUMES.**—The Empress of Russia (a French newspaper states) spends 2,000*l.* a year on perfumery and soaps. Violets are specially grown at Grasse for H.I.M.'s toilet-water and picked between 5 and 7 P.M., "because this is—according to the Empress—the time of day at which their perfume is most delicate. When the cases arrive from Paris, the bottles are examined in the laboratory of the imperial pharmacy, but this is a mere formality. The French manufacturer is so careful and conscientious that, up to the present, no remark has been made upon the consignments."

**NEW STYLE OF SPONGE-FISHING.**—Large quantities of the common kinds of sponges are exported from Tunis, the annual trade of the French protectorate in these goods being estimated at 3,000,000*f.* (120,000*l.*). In connection with the approaching season an ingenious priest (Abbé Raoul, of Tunis) has constructed a little submarine boat, which he hopes to utilise for the purpose of bringing sponge to the surface. It is a tiny craft, with three strong screws, and at a trial a few days ago it plunged to a depth of some forty yards in the Goulette Gulf. We are not told with what result, but if the abbé's hopes are even partially realised, many of the 5,000 sponge-fishers now engaged at the work will find their occupation gone.

**APPRENTICES NOT WANTED.**—The question of improving a profession by raising the curriculum and limiting the number of apprentices is of international interest at present and the novel experiment of the Landes Syndicate deserves notice, as M. Daigne recently explained to his confrères at a southern gathering. The Landes Syndicated Pharmacists, instead of waiting for legislative action, have bound themselves to take no new apprentices till 1910; exception being made in the case of pharmacists' sons, grandsons, and nephews. France, he explains, boasts some 10,000 pharmacists *plus* nearly 3,600 students. If only 3,000 of these succeed in taking their diploma in three years, the number of pharmacies falling vacant within the same period cannot exceed 1,000. What is to become of the other 2,000? They must necessarily swell the already exaggerated number of competitors. His colleagues and himself had accordingly agreed as above, and invited other Syndicates of the South to follow their example. If M. Daigne received no promise of support he at least evoked a discussion which threw some curious sidelight on the recruiting of pharmacists. At Montpellier members of the Syndicate (said M. Albige) keep down the number of apprentices by exacting a premium from all who are not relations of pharmacists. In the Béziers district M. Planchon found no apprentices at all. The abolition of the "second-class" diploma (now coming into practical effect), and the system of two years' universal military service will all help to reduce the number of students and consequently apprentices.

A "RECORD" ATTENDANCE OF ASSISTANTS (estimated at 600) characterised the last general meeting of their Syndicate (Syndicat des Préparateurs en Pharmacie de France) at the Bourse du Travail, Paris. M. Tourniéroux, who presided, called on M. Léon Reynaud (the poet pharmacist, who has just been appointed Secretary of the Syndicate for a further period of two years) to read the half-yearly report. An interesting feature had been the efforts made to come to an understanding for united action with the provincial Syndicates. Rouen and Marseilles had been approached, and Limoges is expected to fall into line shortly. He next alluded to the various steps taken by the Syndicate to obtain official recognition of the "aide-pharmacien." Delegations had been received by M. Cruppi, "rapporteur" of the proposed new Pharmacy Law; two deputies of the Seine department, M. Dejeante and Dr. Dubois (the latter was once a pharmacist's assistant); and M. Delmas, ex-pharmacist, who sits for the Corrèze department. M. Lorin reported a satisfactory balance-sheet, and M. Saforcada urged the necessity of union to ensure success. M. Mansot criticised the syndical programme so far as the Conseils de Prud'hommes were concerned. He thought he and his comrades were employés, not workmen, and should not seek to be judged

by magistrates appointed to settle working-class disputes. M. Lafon dissented, and a warm and lengthy discussion followed. But midnight was long past, and Nature asserted her claims to repose. The "closure" was applied, and at 2 A.M. the meeting dispersed, after voting *nom. con.* M. Léon Reynaud's motion, viz.:

The Preparators in Pharmacy (1) protest against the omission of their corporation from the projected Pharmacy Law; (2) decide henceforth to unite and form a committee of action to defend their interests and uphold their rights; (3) and authorise the Syndicate committee to act diligently in the common interest.

## South African News.

(From our own Correspondents.)

*Note.*—THE CHEMIST AND DRUGGIST is regularly supplied by order to all the members of all the Pharmaceutical Societies in British South Africa, viz.:

SOUTH AFRICAN PHARMACEUTICAL ASSOCIATION.  
PHARMACEUTICAL SOCIETY OF CAPE COLONY.  
NATAL PHARMACEUTICAL SOCIETY.  
TRANSVAAL PHARMACEUTICAL SOCIETY.  
RHODESIA PHARMACEUTICAL SOCIETY.

MR. FRANK C. MATHEW (Heynes, Mathew & Co.), whom we mentioned last week as a candidate for the Claremont Municipal Council, has been duly elected.

MR. J. H. DINWOODIE, chemist, McEwan's Buildings, Bree Street, Johannesburg, has gone to Durban to recruit his health after a six weeks' trying illness.

MR. JOSEPH HEYMANN, of the Golden Mortar Dispensary, Commissioner Street, Johannesburg, celebrated his birthday last month by giving a free dinner to a large number of Johannesburg's poor at the local Salvation Army Barracks.

THE PORTUGUESE GOVERNMENT have constructed a new pier at Delagoa Bay which will greatly facilitate the landing of cargo at that port. On August 7 the steamer *Swazi* (of the Bucknall Line) arrived alongside the new pier, being the first vessel to be berthed.

MESSRS. WARREN BROTHERS, of Durban, have opened a pharmacy at Rossetenville, a suburb a couple of miles from the town on the south side of the reef. This makes the third business Messrs. Warren Brothers have opened within twelve months, their other two establishments being in Durban.

**NEW CHEMISTS.**—The following have been authorised to practise in the Cape Colony as chemists and druggists:—Abdul Karim Abdurahman (Minor, July, 1902), James Largue Geddes (Minor, January, 1899, late of Aberchirder, N.B.), Harry Fred Grout (Minor, April, 1900), David Wallace Robb (Minor, January, 1900, formerly of Hillhead, Glasgow), and George Hutchison Veitch (Minor, April, 1894, late of Ceylon).

**MEDICAL RECIPROCITY.**—In the Cape Parliament on August 10, Mr. Malan drew attention to the action of the Colonial Medical Council in deciding that no one who had a degree other than one from a British University would be admitted to practise as a doctor in the Colony. Such a regulation, he held, was *ultra vires*, and if made at all it should be made by Parliament. His contention was supported by Mr. Sauer, Dr. Hoffman, Dr. Beck, Mr. Merriman, Mr. Molteno, Mr. Sonnenberg and others. Mr. Graham, who was Colonial Secretary when the regulation was approved, said it was aimed at those countries which do not grant reciprocal privileges to British medical men. The discussion gave the *Cape Argus* an opportunity of commenting editorially on the injustices to downtrodden England implied in the speeches of the Bond members on the subject.

**CAPE CHEMISTS' WALK.**—At Wynberg on July 8, a large number of peninsula chemists assembled, the occasion being a "walking competition." The route followed was from Wynberg along Constantia Road, *via* Hout Bay, the Victoria Road, and over the Kloof, to Messrs. Lennon's establishment at the top of Long Street, a distance of some nineteen miles. There were forty-four starters, despatched in four teams. The first prize is valued at 5*l.* The proprietors of "Keen's



One-night Corn-cure" gave a gold watch, while Mr. H. F. Scale gave five medals. Mr. J. Scott (Lennons Limited), who led from the start, came in first, having covered the distance in 3 h. 36 min. 10 sec., E. J. Tyrrell (P. J. Petersen & Co.) being exactly 3 min. behind, followed by Mr. E. Scaife (Lennons), who was 6 min. 8 sec. later. The following firms had walkers: Messrs. Lennon (Limited) (10), Messrs. P. J. Petersen & Co. (15), Messrs. Heynes, Mathew & Co. (16), Messrs. Burroughs Wellcome & Co., Messrs. Wentzell & Schleswig and Messrs. Hopkins & Co. each contributing a man. Mr. E. E. Merrington, wholesale manager of Heynes, Mathew & Co., astonished his younger brethren by walking the greater part of the journey.

**OPENING A BUSINESS.**—In the Supreme Court, Cape Town, on August 7, Messrs Heynes, Mathew & Co., wholesale chemists and druggists, Cape Town, brought an action to recover 336*l.* from Louis Zweigenhagt for goods sold and delivered. The evidence of Mr. Alfred H. Mathew, a partner in the firm of Heynes, Mathew & Co., was to the effect that defendant came to the firm's office in December, 1902, with reference to opening a chemist's business in Hanover Street, Cape Town. Zweigenhagt said he had premises there, and he wished to appoint a Mr. Godfrey, who is a chemist, as manager of the business. Mr. Mathew said goods would only be supplied on condition that Zweigenhagt alone should be financially responsible, as Mr. Godfrey had previously been in the plaintiffs' employ and they had had transactions with him through which they lost money. They arranged to supply Zweigenhagt with an opening order on these terms, giving him goods to the value of about 300*l.* and allowing him ninety days' credit. The goods were sent, and when the bills were delivered to "Godfrey & Co."—the style under which the business was carried on—a duplicate copy was also sent to Zweigenhagt at his private address. He (Mr. Mathew) had seen the defendant three or four times about settling the account, but it was not until they made a legal demand that the defendant did anything in the matter. Defendant, on being pressed, wanted the plaintiff firm to take over the business, and said he would waive any claim with regard to fixtures if they would release him from the debt. They would not entertain this proposal. Defendant then offered them a bill for ninety days for the whole amount, and they said they would only accept it on condition that his wife's name was attached, as he had told them that he had no property, and that it was his wife's. Subsequently a letter was received from Godfrey & Co., tendering the stock, fittings, &c., estimated to be of the value of 330*l.*, to the plaintiffs in settlement of the bill. Corroborative evidence was given by Mr. Frank Carlton Mathew and by Mr. John Alfred Mathew, other partners in the plaintiff firm. The defendant said the shop where Godfrey & Co. carried on business was the property of his wife, for whom he (Zweigenhagt) acted as agent. He denied that he ever undertook any responsibility on behalf of Godfrey. In his evidence, Henry Godfrey said he made no arrangements with Heynes, Mathew & Co. personally. Witness arranged with defendant that he should supply fittings, and defendant said he had arranged satisfactorily with Heynes, Mathew & Co., on witness's behalf, as to the stock. The only concern Zweigenhagt had with the business was in regard to the money spent on the fittings. The business was witness's; defendant had no share in it. Witness knew Heynes, Mathew & Co. would not accept his undertaking to be responsible. Zweigenhagt originally agreed to guarantee witness 20*l.* a month salary; but he afterwards said witness should draw it from the business. The Court gave judgment for plaintiffs, with costs.

## Colonial and Foreign News.

**AMALGAMATION.**—Messrs. Cargills (Limited) have purchased the business of Messrs. Neil S. Campbell & Co. in the Cinnamon Gardens, Colombo. The intention is to carry on a general oilman-stores and drug-business as most convenient for that part of Colombo.

**QUININE.**—With the object of extending the use of quinine among the poorer classes of the Bombay Presidency, who suffer much from malarial fever, the Government has

arranged for the sale of quinine at 2 pies per packet of 5 gr. instead of 3 pies, as at present.

**REGULATING UNFAIR COMPETITION IN GERMANY.**—The Committee on Trade and Commerce of the German Bundesrath has for some time been at work framing a Bill to make laws to prevent unfair competition. The material and data it has in hand were furnished by tradesmen and merchants from all parts of the Empire. It is expected that the draft of the Bill will soon be made public.

**ANTI-CUTTING IN N.S.W.**—The Pharmaceutical Society of New South Wales convened a meeting at Sydney on July 9 in regard to anti-cutting (*C. & D.*, August 22, page 353). It was resolved to form the "Anti cutting Association of New South Wales," and the subscription was fixed at one guinea. Several firms have contributed towards the initial expenses.

**GERMAN POTASH SYNDICATE.**—The Handelstag, which is the German equivalent of the British Association of Chambers of Commerce, is to be approached with a view to bringing pressure upon the Prussian Minister of Commerce, to consider the question of the treatment accorded by the potash syndicate to merchants. Though the question is not exactly a new one, it is being advanced on the present occasion by the Chamber of Commerce for Eastern Niederlausitz at Sorau. This Chamber of Commerce, in the course of a petition forwarded to the Handelstag asking for the appointment of a special committee to deal with the complaints of merchants in regard to the potash syndicate, draws attention to a statement made by the Minister of Commerce in the Prussian Diet last February to the effect that it appeared to him that the permanent preference given by the potash syndicate to the German Agricultural Company as the largest customer was justified. At the same time the Minister remarked that he would endeavour—the Prussian State being largely interested in the syndicate—to take the initiative in suggesting to the syndicate that permission should be given to individual customers (merchants) to combine for the purpose of being included in the higher classes of rebates, but he added that he could not hold out any hope of success. The Niederlausitz Chamber of Commerce now states that, in view of further complaints, it is desirable that the official bodies representing industry and commerce should express an opinion as to whether the preference given to the German Agricultural Company is justified. It is suggested that the Handelstag would thereby afford Herr Moller an opportunity of declaring whether he is Minister for Agriculture or Minister of Commerce.

**RUSSIAN ITEMS.**—The St. Petersburg Medical Council is agitating for the prohibition of the sale of benzine in chemists' shops, alleging that most of the explosions and accidents with benzine during the past few years have been in chemists' shops. At present, it is urged, chemists have no safe places to keep explosives.—A temporary "bureau" is at work for the Russian Pharmaceutical Society organising a permanent Commission for dealing with matters affecting village and town pharmacies. All interested, besides chemists, in the object of the bureau are invited to join the movement.—By the Law of May 12 the Minister of Finance allows for a trial period of three years the sale of duty-free spirits and by-products, denatured, for technical, industrial, pharmaceutical, and sanitary purposes. The permission is accompanied by a series of conditions under which the privilege is granted.—The Medical Council proposes to fix a special minimum strength for vinegar.—A sum of 70,000*r.* (7,000*l.*) has been granted by the Russian Government for technical education in the Moscow University. Of that sum 30,000*r.* is allocated to a Physical Institute, 15,000*r.* to a chemical laboratory, and the balance to physico-geographical, zoological, and botanical teaching.—The *St. Petersburg Pharmaceutical Journal* states that the St. Petersburg Medical Council declines to give an opinion in respect to the sanitary aspect of the use of aluminium siphon-tops. The Council considering that aluminium as a metal changes under the action of alkalis, &c., says it cannot be recognised unconditionally as a reliable metal; and in view of the extremely diversified constitution of artificial mineral waters and fruit drinks, it is impossible to foresee in what measure contact with the aluminium top may be productive of decomposition.



## Legal Reports.

### High Court Cases.

KODAK *v.* DODD.

BEFORE Mr. Justice Walton, sitting as Vacation Judge in the High Court of Justice, London, on Wednesday, September 2, an application by Kodak (Limited) against Dodd for an injunction was down for hearing. Counsel for the plaintiff company said the defendant in the case had consented to treat the motion as the trial of the action, and to an order for a perpetual injunction restraining him from committing the acts complained of, and to pay the costs and 20% damages. Order accordingly.

### HOWARD'S STORES (LIMITED).

A CASE *in re* Howard's Stores (Limited), drapers, chemists, and grocers, of Bromley, Kent, was heard by Mr. Justice Walton on the same day. Mr. Draper, who appeared for Mr. Howard, said it was a motion by that gentleman and the company that within the provisions of the Companies Act, 1893, a memorandum should be registered setting forth the number of shares issued to Mr. Howard for consideration other than cash. It appeared that the company was incorporated in 1893 with a capital of 45 000/., Mr. Howard selling his premises, stock, and goodwill for 40,000/., of which 25 000/., was to be in cash and 15,000/., in ordinary shares. However, there was only 9 000/., paid in cash, and 5,236/., subsequently. For the balance due Mr. Howard agreed in July last to accept preference shares for 4,764/., and some ordinary shares. By a section of the Act it was provided that a contract for the sale of a business to a company for consideration other than cash should be registered within a certain time. That time had by an oversight been allowed to expire, and the application was that it should be allowed to be done now. His Lordship made the order asked for, there being no opposition, subject to the Registrar being satisfied with the form of the memorandum.

### Medicine-stamp Acts.

#### UNSTAMPED PROPRIETARIES.

A HERBALIST named Mark Allan, of Askew Road, Gateshead, was charged at the Gateshead Police Court on August 28 with having sold dutiable medicines unstamped. A plea of guilty was put in. Mr. Hawkins, who prosecuted for the Inland Revenue authorities, quoted the law on the point; and Mr. T. Jameson, an Inland Revenue officer, spoke to calling at the shop of the defendant and purchasing six-pennyworth of "Golden drops," advertised on a bill in the window as being good for kidney-disease and lumbago. He also bought some liniment, which was said to be good for rheumatic pains. Both the bottles were unstamped, and each should have borne a three-halfpenny stamp. Mr. Edward Clark, for the defence, said that was the first prosecution of the kind in the district, and his client was ignorant of the exact law on the subject.

Mr. Hawkins said that the man advertised himself as "King of the forest for herbal medicines." (Laughter.)

Mr. Clark: He is what he says he is; that is, he gathers his own herbs. (Laughter.)

Proceeding, Mr. Clark said that though ignorance of the law was no excuse, yet even lawyers did not know the whole law, much less outsiders. He admitted the offence was complete, but suggested that now the ignorance was removed a small penalty would be sufficient. Should the sale justify his client again selling the articles named, he would in future buy stamps.

Mr. Hawkins did not press for heavy penalties, and the Bench imposed fines of 10s. and costs for each of the two offences.

### Sale of Food and Drugs Acts.

#### PEPPER.

AT Church Police Court on August 27, Messrs. Shorrocks & Son, wholesale grocers, Blackburn, were summoned for issuing false warranties with pepper. The defendants were

summoned for having given a false warranty in writing to a man named Newsome in respect to the sale of pepper. A sample of the pepper was purchased from Newsome by a food and drugs inspector, and the county analyst certified that it contained not more than 90 per cent. of peppercorns, and not less than 10 per cent. of bleached pepper-husks. Newsome produced a warranty from Messrs. Shorrocks, and the case was dismissed, and a summons was issued against Messrs. Shorrocks. Since they were summoned notice of a warranty had been given by Messrs. Shorrocks for the pepper, which they had received from Messrs. Evans, Gray & Hood, of 35 St. Mary-at-Hill, E.C. That warranty stated that all the goods specified in it were warranted pure. The warranty was issued on February 27 this year by Messrs. Evans, Gray & Hood, and that being so, the County Council could not prosecute them for having sold adulterated pepper, as the six months allowed under the Act had expired. Therefore the prosecuting solicitor asked the Bench to withdraw the summons. This course was ultimately agreed to, each side to pay its own costs.

### GINGER-WINE PRESERVATIVE.

AT the Camdonagh Petty Sessions last week, James O'Doherty, Camdonagh, was summoned for having sold ginger wine which, according to the certificate of the analyst, Mr. Barklie (Belfast), contained 33 gr. of salicylic acid per pint, and which he alleged was injurious to health. Mr. O'Doherty, solicitor, who appeared for the defendant, said this acid was put into cordials to satisfy teetotalers, who objected to intoxicants in cordials, and for the purpose of preservation. Dr. O'Callaghan, medical officer, said the dose prescribed by the British Pharmacopoeia was from 5 to 20 gr., which was a far larger quantity than that in question in the present case, and it would not be injurious to health. The Magistrates held that the drug in the quantity used was not injurious to health, that it was added as a preservative, and they dismissed the case.

(See also page 414.)

## Bankruptcies and Failures.

*Re* ANNIE ELIZABETH CONON (trading as Robinson & Co.), High Street, Chester-le-Street, Durham, Druggist, &c.

THE following are creditors:

	£	s.	d.
Blandy Brothers, London .. ..	17	11	6
Curtiss & Harvey (Limited), London ..	45	11	0
Harker, Stagg & Morgan (Limited), London .. ..	22	7	4
Kennerday & Co., Exeter .. ..	21	16	7
McConnell, J. & J. (Limited), Belfast ..	11	0	0
Menzies, James, Glasgow .. ..	17	17	3
Spencer, Meakers & Co., Newcastle- upon-Tyne .. ..	12	3	6
Wilkinson & Simpson (Limited), New- castle-upon-Tyne .. ..	176	4	3
Partly-secured creditors .. ..	133	12	5
(Estimated value of security, 60%.)			
Preferential creditors .. ..	23	18	0

*Re* JOHN ERNEST EDINGTON, Hopwood Street, Liverpool, Chemist's Manager.

AT the Liverpool Bankruptcy Court on August 27, the public examination of this debtor took place. His statement of affairs showed liabilities 74/., and assets *nil*. He stated that he had been employed at different times in St. Helens, Manchester, Birkenhead, Sierra Leone, and the French Congo. He said his father, who had been in business as a chemist at St. Helens about nine years ago, got into difficulties, and the bankrupt's brother bought the business from the trustee. This business was carried on by the debtor and his brother for about a year, but they found it unremunerative. Afterwards debtor opened a store at Watson Street, Birkenhead, and this was carried on for about ten months. He was not a qualified chemist, however, and was prosecuted by the Pharmaceutical Society, being mulcted in penalties amounting to about 50/. After this he sold his business and went out to Sierra Leone for Messrs. Paterson & Zochories, West African merchants, of Manchester. There he managed a store, at a salary of 150/., the first year and 200/., the second. His health failed, however, and he spent the greater part of his spare cash in paying doctors' bills. He afterwards went to the Congo, but had



to resign on account of ill-health and return home. Since then he had earned a livelihood as manager in various parts of England. He had been in difficulties for some years. He and his brother at one time earned a living by betting, but he had not done any betting for some time. He had a sick wife and two children to support, and could make no offer to his creditors, although he was at present in a situation. The examination was adjourned.

**Re EDWARD S. BALCHIN**, trading as Cosway & Rutter, 103 High Road, Kilburn, Pharmaceutical Chemist.

The liabilities in this matter are returned at 433*l.* and the assets at 315*l.* 15*s.*, with fully-secured creditors 445*l.*, and preferential creditors 45*l.* Following is a list of creditors:

	£	s.	d.
Allen & Hanburys (Limited), London	19	0	0
Bono, G., Guildford	16	0	0
Dainton & Son, London	44	0	0
Durafort & Fils, London	20	0	0
Gobb & Warner, Fareham	50	0	0
Hefford, C., London	10	0	0
Holland, —, London	12	0	0
Lloyd, P. H., & Co., London	353	0	0
Mans, J. E., jun., & Co, London	354	0	0
Phillips, J., London	20	0	0
Toogood, W., London	14	0	0
The Warden, St. Bart's Hospital	68	0	0

## New Companies & Company News.

**HENRY EGAN & SONS (LIMITED).**—Registered in Dublin. Capital 2,000*l.*, in 1*l.* shares. Objects: To carry on the business of general grocers, dealers in provisions, drngs, chemicals, &c. The first directors are H. Egan, P. J. Egan, and H. J. Egan. Qualification, 100 shares. Remuneration not to exceed 50*l.* each per annum. Registered office, Rathangan, co. Kildare.

**KENNETT'S (LIMITED).**—Capital 5,000*l.*, in 1*l.* shares. Objects: To carry on the business of chemists, druggists, dentists, opticians, herbalists, dealers in surgical, optical, photographic and scientific appliances and materials, &c. The first subscribers are: W. T. C. Kennett, 7 Abernethy Terrace, Lee, S.E., chemist's assistant; Mrs. I. B. Kennett, 7 Abernethy Terrace, Lee, S.E.; H. W. Joliffe, Baroda, Ventnor, coal-merchant; E. G. Paris, St. John's House, Ventnor, accountant; Miss G. L. Riches, Fairfield, High Road, Lee; G. C. Woods, St. John's Chambers, Ventnor, solicitor; and G. R. Stanfield, 3 Clifford Gardens, Kensal Rise, N.W., clerk. No initial public issue. The first directors are W. Dedman, H. Douthwaite, W. T. C. Kennett, and H. W. Joliffe. Qualification, 1 share. Remuneration as fixed by the company. Registered office, 349 Lee High Road, Lee, Kent.

**JAGO & JEROME (SUCCESSORS) (LIMITED).**—Capital 5,000*l.*, in 1*l.* shares. Objects: To adopt an agreement with R. C. Oates, and to carry on the business of soap and perfumery makers, chemists, importers, and exporters of raw, manufactured, and recovered substances in connection therewith, &c. The first subscribers are: R. C. Oates, 19 Hillside Road, Wallasey, manager; E. L. Pasquet, 189 Worcester Road, Bootle, perfumer; F. W. M. Wilson, 23 Marlborough Road, Tue Brook, Liverpool, chartered accountant; F. E. Dean, Killarney House, Station Road, Roby, cashier; A. J. Cartwright, 2 Hunter's Lane, Wavertree, Liverpool, clerk; R. McGowen, 81 Dale Street, Liverpool, solicitor; and E. J. Peate, 42 Nuttall Street, Edge Hill, Liverpool, bookkeeper. No initial public issue. The subscribers are to appoint the first directors. Qualification, 100*l.* Remuneration as fixed by the company.

**HENRY HODDER & CO. (LIMITED), BRISTOL.**—The directors of Henry Hodder & Co. (Limited), who have a number of chemists' shops in Bristol, have decided to issue 5,000 new ordinary shares of 1*l.* each to the shareholders *pro rata* to their present holding, at the price of 40*s.* per share. The issue is required for the extension of the company's business; the necessary resolutions have been passed by the shareholders, and allotments will be made forthwith. The current market-price of Hodder's 1*l.* shares on the Bristol Stock Exchange is 46*s.*–47*s.*; and the rates of dividend for the past two half-years have been 14 and 10 per cent. respectively.

**HOMOCRA (LIMITED).**—The report of the directors for the year ending March 31 states that, after payment of salaries and working expenses, payment of advertising-charges incurred during the year under review, there remains the sum of 2,123*l.* 18*s.* 10*d.*, which is sufficient to wipe out the

balance of 1,533*l.* 3*s.* 10*d.* now standing to debit of advertising suspense account, and leaving a balance of 590*l.* 15*s.* to be carried forward. In consequence of opposition, the resolutions carried at the extraordinary general meetings of March 13 and 30 were defeated. After prolonged negotiations, an arrangement has been arrived at which the directors consider will be satisfactory to both classes of shareholders, and which they think will result in placing the affairs of the company on a satisfactory basis. These proposals will be put forward at an extraordinary meeting of the company to be held after the ordinary general meeting on September 10. The directors think it absolutely necessary that the capital should be reduced in order that the company be placed on a firmer financial basis. The proposition is, therefore, that each preference share of 1*l.* shall be converted into a preference share of 10*s.*, and that each ordinary share of 1*l.* shall be converted into an ordinary share of 5*s.* The preference shareholders are asked to waive their right to the accumulated dividends up to March 31, 1903, and to accept in lieu thereof 4,000 preference shares of 10*s.* each fully paid, which would be allotted to a trustee for distribution, either by transfer or in cash arising from proceeds of sale, amongst the preference shareholders. The ordinary shareholders are asked to confirm the right of the preference shareholders to priority of payment of capital as well as of income in case of liquidation, and they are also asked to make the necessary alterations in the articles of association, providing for the preference shares of 10*s.* having two votes, and the ordinary shares of 5*s.* one vote—i.e., one vote for each 5*s.*

## Deeds of Arrangement.

**Brown, Joseph Winspear**, 66 Westgate, Peterborough, chemist and druggist. Trustee, Jesse Adnett, Oriol House, Peterborough, C.C. High Bailiff. Dated, August 20; filed, August 26. Secured creditors, 18*l.* 13*s.* 5*d.*; liabilities unsecured, 507*l.* 17*s.* 7*d.*; estimated net assets, 138*l.* 6*s.* 7*d.* Among the creditors are:

	£	s.	d.
Barclay & Sons (Limited), London	13	0	0
Brown, Jonathan, Barnard Castle	50	0	0
Brown, Miss, Northampton	120	0	0
Harrison, J. T., Peterborough	11	0	0
Noble, H. E., Peterborough	159	0	0
Wyleys (Limited), Coventry	88	0	0
Bankers' claims	11	0	0

**Hunter, Archibald George Crosbie**, trading as Archibald Hunter and A. Hunter & Co., 35 London Road, Brighton, chemist. Trustees, Richard Sands, South Parade, Nottingham, chartered accountant, and another. Dated, August 21; filed, August 27. Liabilities unsecured, 1,295*l.* 1*s.* 2*d.*; estimated net assets, 540*l.* Among the creditors are:

	£	s.	d.
Cooper, Mrs. P., Brighton	76	0	0
Davy Hill & Co., London	89	0	0
Eberlin, A., Nottingham	442	0	0
Evans Sons Lescher & Webb (Limited), London	17	0	0
Lynch & Co. (Limited), London	15	0	0
May, Roberts & Co., London	68	0	0
Maw, Son, & Sons, London	46	0	0
Bankers' claims	414	0	0

## Gazette.

### Partnerships Dissolved.

**Aspinall, S., and Morris, R. C.**, under the style of Aspinall & Morris, Erdington, Warwickshire, physicians and surgeons.

**Hearn, G., and Benton, W. H.**, under the style of Hearn & Benton, Romford, Essex, mineral-water manufacturers.

**Wardleworth, E. D., and Johnson, I. W.**, under the style of Wardleworth & Johnson, Bury, Lancashire, physicians and surgeons.

### The Bankruptcy Acts, 1883 and 1890.

#### RECEIVING ORDER.

**Westgate, Walter**, Balsham, Cambridgeshire, veterinary surgeon.

#### ADJUDICATION.

**Last, Valentine**, Liverpool, chemist.



## Deutscher Apotheker-Verein.

THE thirty-second annual Conference of the German Pharmaceutical Society was held at Munich on August 26, 27, and 28. Dr. Salzmann, of Berlin (the President) occupying the chair. The guests included his Excellency the State Councillor von Schrant (as representative of the Bavarian Ministry), Geheimrat Fröhlich (as representative of the Prussian Ministry of Education), Dr. von Brunner (Burgomaster of Munich), and Professor Dr. Hilger. Herr von Schrant welcomed the members of the Society. Professor Dr. Hilger combined a lecture on "Pharmacy, Past and Present," with his address of greeting, in the course of which he expressed the wish that the "maturum" of a Gymnasium or Real-gymnasium should be the basis for the pharmaceutical training, that the training itself should be prolonged, that all Universities should have special professors of pharmacy, with laboratories of their own, and that pharmacists should be appointed to be food-analysts. Dr. Hilger's ideal is that the pharmacist should be the State hygienic official.

At present the Society comprises 3,502 members, divided among seventy-seven districts, of which seventy-five were represented by 100 delegates at the opening of the proceedings. Representatives of the Swiss Pharmaceutical Society (M. Jenny) and of Dutch apothecaries (M. Schoepp) were also present; whilst telegraphic greetings were received from Austrian friends.

### COMPULSORY INSURANCE FOR THE PROFESSION.

The transaction of general business having been completed, the Conference proceeded to discuss the question of infirmity and old-age insurance. On this subject various proposals were submitted, although all were in favour of compulsory insurance. Eventually a motion presented by the Council of the Association was unanimously adopted, approving in principle the introduction of compulsory insurance, and in point of fact insurance by way of Imperial legislation against old age and infirmity of pharmacists and of their widows and children. It was decided in this connection to authorise the Council to submit proposals on the subject at the next general assembly, which is to be held at Hamburg, and in the meantime to consult with the members of the Association.

### FINANCIAL ASSISTANCE TO PHARMACISTS.

The question of the further development of the still comparatively new Credit Association of German Pharmacists, which has been formed as a company of 200 shareholders of 50*l.* each, and which already has a reserve fund of 200*l.*, led to a long discussion. It was emphasised that considerable difficulty is sometimes experienced by pharmacists in obtaining a loan of money, and that it is necessary to so improve an institution of credit for the profession that in course of time it would obtain the right of issuing mortgage deeds. It was also suggested that a central establishment should be founded in Berlin, with branches in the provinces and in the individual States forming the German Empire. Although no specific proposals were made in this direction, it was mentioned that the Credit Association had already acted advantageously in the negotiation of mortgages, and the Council and the members were requested to support and promote the interests of this loan society.

### AN IMPERIAL MEDICINE-TAX.

The Council of the Society brought forward the subject of the imposition of a uniform medicine-tax throughout Germany. It was proposed by way of resolution, on behalf of the Council, that the Society should agree in principle to the introduction of an Imperial medicine-tax on conditions, among others, that the tax must at least pause at the amount of the present average rates of the various German medicine-taxes, as a cheapening of medicines would deprive a large number of pharmacists of their livelihood; that in the elaboration of such a tax representatives of the pharmaceutical profession should be invited to co-operate from all the States which now possess separate medicine-taxes; and that an appropriate simplification of the method of

calculation under the tax should be effected. After a protracted discussion the resolution was adopted.

### THE QUESTION OF EDUCATION.

Dr. Bedall, of Munich, presented a motion, on behalf of the Upper Silesian district, in relation to the preliminary and advanced education of pharmacists. As amplified by the Council, the resolution, which was approved with three dissentients, expressed the regret of the Conference that the reform of pharmaceutical preliminary and advanced education, which had been demanded by the profession for many years past, and which had been recognised by the Imperial Government as being urgently necessary, had not yet been carried out. The resolution further requested the Council to use its best endeavours to secure the speedy introduction of a new regulation, and that the basis for the same should be chosen from a Major certificate of a Gymnasium or a Real-gymnasium.

### OTHER BUSINESS.

The presentation by Dr. Rapp, of Munich, of a report dealing with bacteriological investigations in the laboratory of the Munich Hospital, was followed by the reference to the Council for consideration of various motions submitted by district branches of the Association, and the adoption of a resolution condemning the dangerous methods resorted to in Prussian prisons by the administration of medicines by persons who have not been educated as pharmacists. In conclusion, the Conference authorised the Council to approach the Imperial Chancellor in order to elucidate the question, which is not settled by the present law, as to the number of tubes with saccharin which pharmacists may dispose of at any one time.

A resolution was unanimously passed in favour of the use of denatured alcohol for the preparation of external remedies, this being considered a desirable thing now that the use of duty-free pure alcohol for this purpose is prohibited.

An interesting exhibition of pharmaceutical apparatus, which was held in connection with the meeting, was opened on August 25. The festivities arranged were most successful.

## Trade Notes.

MESSRS. WARDALE & CO., 132 High Street, N., East Ham, send us their price-list mechanical work for dentists. The firm give lessons to chemists in taking impressions.

BLAUD'S PILLS.—Messrs. Matthews & Wilson, 46-48 Portland Road, South Norwood, S.E., make an interesting announcement in this issue regarding their make of Blaud's pills, which they guarantee to contain 1 gr. of ferrous carbonate in 5 gr.

"PEPULE" PEPSIN AND ZYMINE.—Messrs. Fairchild Brothers & Foster, Snow Hill Buildings, E.C., have added to their list sugar-coated tablets, each containing 2 gr. of their 1-3,000 pepsin and 3 gr. of zymine. The latter constituent is a mixture of the three pancreatic enzymes, and the combination is a useful one in those cases where intestinal as well as stomachic digestion requires stimulation.

THE LAXATIVE BROMO-QUININE TABLETS, introduced into this country by the Paris Medicine Company as a one-day cold-cure, have met with that recognition which unfortunately carries with it too often imitations of the original. The company have taken legal proceedings in one case, and the terms of Mr. Justice Byrne's order are published by the company in the advertisement section of this issue.

NON-LIABLE AILMENT-LABELS.—Messrs. James Townshend & Son, chemists' printers, Exeter and London, have submitted to us proofs of a series of labels for all kinds of medicinal preparations which are known, admitted, and approved remedies. The labels, while being non-labile, are well worded, and demonstrate that the new rendering of the Acts will be a blessing in disguise to qualified chemists.

A CONSUMPTION-CURE.—A remedy for consumption and other tubercular diseases has just been placed on the market by Mr. William Watt, manufacturing chemist, 44 Three Colt Street, Limehouse, E. It is in the form of powders, is name "Tubacide," and is packed in cartons to retail at 2*s.* 9*d.*



each. Mr. Watt has hitherto done a postal trade with his "Tubacide" customers all over the country, but he now desires to secure the co-operation of his brother chemists in the sale of his remedy.

"ZEPTO" TARTAR-REMOVER.—The showcard in respect to this excellent article which Messrs. Thomas Christy & Co., Old Swan Lane, E.C., are offering to the trade is an exceptionally fine production in water-colour, the sketch being framed in white. A small half-tone engraving of the picture was given in the firm's advertisement on page 34 of our issue of August 22, but this scarcely does justice to it, as the bold outlines and rich brown tones of the girl's hair, and the mirror she holds, receive insufficient emphasis in monochrome. The framed picture measures 24 inches by 16 inches, and it is worth noting that it is painted by hand. Messrs. T. Christy & Co. offer to lend the cards for window-display in order to introduce the tartar-remover, which once used will continue to sell itself.

## Business Changes.

MR. E. J. WILSON, Somerset, is removing from Broad Street to High Street, Wells, Somerset.

MR. HATTON, chemist and druggist, has opened a new pharmacy on the Isle of Portland.

MR. G. B. CLEGHORN, late of Castle Hediugham, has opened a chemist's business at West Mersea, Essex.

MR. G. LAWRENSON, pharmaceutical chemist, has purchased the business of Mr. Saville at High Street, Bognor.

MR. MANTON OLDFIELD (Felee & Co.), chemist, High Street, Bromley, Kent, has sold his business to Mr. Francis.

MR. W. WILKINS, chemist and druggist, has bought the business of Mr. W. Shistou, in Canterbury Street, Coventry.

MR. A. E. COE, chemist and druggist, has purchased from Messrs. Savage & Co., of Brighton, their branch business at Rottingdean.

MESSRS. BOOTS (LIMITED) have taken premises at 51 High Street, Lewes, which will be opened after the necessary alterations have been completed.

MR. C. H. SIDDLE, chemist and druggist, of Scarborough, has bought the business of Mr. H. Payne (Rome & Co.), at 16 Lower Road, Rotherhithe, S.E.

MR. KENNETT, from Messrs. W. Butcher & Son's, Blackheath, S.E., will shortly open a drug-stores under the name of Kennett (Limited), at Lee Green, S.E.

MESSRS. GOULD & Co., chemists, Oxford Street, London, W., have purchased Mr. B. K. Earnshaw's business at the corner of Terminus Road and Seaside Road, Eastbourne.

MR. W. C. FORD, chemist and druggist, Camden Road, N.W., has bought Mr. F. E. White's business at St. Mark's Road, Mitcham, which he will carry on as a branch.

MR. D. H. JAY, for many years with Messrs. H. T. Kirby & Co., Newman Street, Oxford Street, W., has purchased the business at St. George's Road, Hastings, formerly carried on by Mr. John Tully, chemist and druggist.

THE business of Stern Brothers, at 57 Gracechurch Street, E.C., has been converted into a company, in which Messrs. J. Stern, L. Stern, and J. Sonneborn are directors, and will continue their same active interest in the business. No change has been made in the *personnel* of the firm or its officers, and Messrs. Wallach Brothers will continue to act as the general managers for Great Britain and Colonies. The style of the new company will be the Stern-Sonneborn Oil Company.

OWING to the slackness in the tinplate-trade in the Swansea district, the drug-trade of Swansea is at present very much depressed. Mr. John E. Thomas, chemist and druggist, has closed his pharmacy at 1 St. Helen's Road. Mr. John W. Lloyd, chemist and druggist, owing to continued ill-health, is about to close his business at 53 Oxford Street. Mr. William George, pharmaceutical chemist, has satisfactorily disposed of the lease of his premises at 10 Ox-

ford Street. Mr. J. Kenn Roberts, chemist and druggist, is removing from Marlborough Road, Rhyddings, to Bryn-y-mor Road. It is reported that besides those mentioned there are four other businesses in the market.

## Births.

CARRUTHERS.—On August 29, at 31 St. John's Street, Bedford, the wife of Ernest Murray Carruthers, chemist and druggist, of a daughter.

WILSON.—On September 2, at 8 Lowfield Street, Dartford, the wife of F. C. Isham Wilson, chemist and druggist, of a son.

## Marriages.

BUCK—SMITH.—At Redcliffe Road Church, Nottingham, on September 1, by the Rev. Henry James, of Leeds, assisted by the Rev. E. F. H. Capey, pastor, William Henry Buck, pharmaceutical chemist, Goole, Yorks, to Florence Ethel, eldest daughter of Mr. James E. Smith, Garth-Dene, Sherwood Rise, Nottingham.

SACHS—KANTOR.—On August 9, at Pretoria, by the Rev. Rosenberg, John Sachs, chemist, Pretoria, eldest son of the late Albert Sachs, pharmaceutical chemist, Russia, to Dora, eldest daughter of Mr. S. Kantor, Pretoria.

TOLMIE—MACDONALD.—At Cockburn Hotel, Bath Street, Glasgow, on August 26, by Rev. A. Gillison, Maryhill U.F. Church, William John Tolmie, chemist and druggist, Stornoway, to Margaret Ann, only daughter of Mr. Wm. Macdonald, Garrahost, Stornoway.

## Deaths.

COUPE.—At Shoeburyness, on August 16, Mr. William Coupe, chemist and druggist, aged seventy-nine.

FARIS.—On August 28, at Dublin, Mr. William J. Faris, chemist and druggist, a member of the firm of Messrs. McMaster, Hodgson & Co. (Limited), wholesale druggists, Capel Street, Dublin.

FOLLEY.—On September 1, at Plaistow, George Folley, for twenty-five years a faithful servant in the business of Mr. Thos. Christy, F.L.S., aged forty-six.

JONES.—At Llandiloos, on August 20, Mr. Thomas Pryce Jones, chemist and druggist, aged forty-eight. Mr. Pryce Jones was the youngest son of the late Mr. Edward Jones, of Llandiloos. After becoming a qualified chemist, he commenced business in his native town, where he had been resident for upwards of twenty-one years. He was a prominent Freemason, but took little part in public affairs. His death will be regretted by a large circle of friends.

TROKE.—On Friday, August 28, Mr. Charles Troke, chemist and druggist (formerly of Walker, Troke & Co., London), aged seventy-seven years. Mr. Troke was of Devonshire birth, and commenced his business life at Exeter. Then he came to Loudon, and was for some years in the employ of Messrs. Goddard & Co., a firm long since extinct. In 1864 he joined the late Mr. John Wild Gabriel in business as Gabriel & Troke, at White Street, Moorfields. On Mr. Gabriel's retirement in 1885 he entered into partnership with Mr. George Walker, of Coventry, and traded as Walker, Troke & Co. Mr. Troke for many years travelled in the interests of his firm, and owing to failing health retired from business in December, 1901. He had been a Local Secretary to the Pharmaceutical Society, and devoted much of his time to religious work amongst the Wesleyans, of which body he was a prominent member.

WILLIAMS.—On August 16, at Ty Gwynne, Swindon, Mr. William Williams, pharmaceutical chemist, 44 Bridge Street, Swindon, aged forty-three years.



## A Colonial Qualifying Examination.

THE following gives the gist of the examination required for qualification in New Zealand. The questions were set at the examination in April of this year by the N.Z. Board of Examiners, and are sent to us by Mr. R. C. Cowley:

### MATERIA MEDICA

(1) Recognise the four specimens submitted. Give the name, natural order, and habitat of the plants yielding them. (2) Describe the composition of resins, oleo-resins, gum-resins, and balsams. Define clearly how they differ from one another. Give a B.P. example of each, naming the plant yielding it; and outline the process of extracting any one. (3) State the name, natural order, and geographical source of the plants yielding atropine, veratrine, codeine, acid benzoic, aloin, capsin. (4) Write a short description of the formation and composition of gum acacia and gum tragacanth. Compare the two gums, showing how they differ and also resemble one another. (5) Give the name, natural order, and habitat of the plants yielding gentian-root, figs, sandalwood oil, cacao-butter, opium, mezereon-bark. (6) What is aloe and how is it obtained? Give the names of the plants yielding the official varieties. What other kinds are commonly met, and how are they distinguished from the official? Name the official preparations of one. (7) Write a short account of the bitter almond and the sweet almond, and explain fully the formation of hydrocyanic acid in the one and the reason for its absence in the other. (8) Gossypium: what part of the plant is this, and how is it obtained? Give a description of its characters and tests and the purpose of its place in the B.P. Candidates to answer six questions only, and No. 1 is compulsory.

### PHARMACY.

(1) Dispense any two of the prescriptions at counter marked A. (2) Read and explain the autograph prescriptions submitted. (3) Render into good Latin without abbreviations, and translate into English the following prescriptions:

Ol. terebin.	...	...	...	dr. ij.
Ol. ricini	...	...	...	dr. iv.
P. acaciæ opt.	...	...	...	dr. iiss.
Tr. card. co.	...	...	...	dr. iiss.

Ft. emulsio s.a.

Sig.: Semis hac noct. reliq. cras mane p.p.a.

Phosphor.	...	...	...	gr. $\frac{1}{30}$
Strychn.	...	...	...	gr. $\frac{1}{30}$
Ac. arsen.	...	...	...	gr. $\frac{1}{30}$
Pulv. cinchon.	...	...	...	gr. ij.

Ft. pil. et m. t. vj.

Sig.: Cap. j. bis terve die.

(4) Give the B.P. process for the manufacture of liq. bis. et ammon. cit. Give the strength and dose. (5) How would you separately dispense in mixture form bromoform, terebene, phenacetin, ext. filicis maris? (6) What is a tincture? Describe the general processes of manufacture. Enumerate the different strengths of alcohol used. Explain the advantage of using different strengths of alcohol, and give examples proving your answer. (7) You are asked to dispense 5 per cent. solution of ichthylol in glycerin by volume, and 5 per cent. solution by weight; calculate the quantity of ichthylol and glycerin to make 2 oz. by volume and 2 oz. by weight. Describe in each case the method of dispensing. (8) Sodii brom. 5.00 grams, pot. iodid. 1.5 gram, syr. aurantii 15 c.c., aq. dest. 155 c.c. Convert this into Imperial weights and measures.

(Candidates to answer all the questions. The first and second to count as practical pharmacy.)

### BOTANY.

(Only six questions are to be attempted.)

(1) What botanical terms are used to describe the different kinds of fruit? Write a short description of a fruit of each kind, giving an example. (2) What is meant by floral formula and by floral diagram? Give the formula and the diagram for any flower that you know, naming the flower. (3) Write a short note with regard to stipules, giving examples of different kinds of stipules. (4) What is meant by placentation? What different kinds of placentation do you know? Give an example of each kind. (5) Describe a pollen-grain and an ovule. Compare and contrast the two, from the point of view of structure. (6) What is protoplasm? Describe some of the ways in which the cell contents of a vegetable cell may be disposed. (7) What orders of plants constitute the vascular cryptogams? Why is that name applied to them? (8) Name and describe a plant belonging to the *Myrtaceæ*. What are the chief natural products yielded by plants of this order?

### CHEMISTRY.

(Only six questions are to be attempted.)

(1) How are potassium chlorate, potassium bichromate, and bleaching-powder prepared? Mention any commercial uses of each of these substances. (2) What dissolved substances would you expect to find in rain-water, river-water, and spring-water? Distinguish between the temporary and permanent hardness of water. How can hard waters be softened? (3) Explain the chemistry of the reaction which occurs when olive oil or tallow is boiled with a solution of caustic soda. (4) Point out the characteristic differences in the reactions of ferrous and ferric salts, and explain any method whereby the percentage of metallic iron in a sample of "ferrous redactum" can be approximately ascertained. (5) What do you understand by an alum? Calculate the percentage composition of potash alum. What volume of ammonia measured at 0° C. and 760 mm. could be obtained from 100 grammes of ammonia alum (H=1; N=14; O=16; Al=27; S=32; K=39)? (6) How can the sp. gr. and vapour density of a volatile liquid be ascertained? What relationship is believed to exist between the vapour-density and the molecular weight of a compound? (7) By what tests would you distinguish between (a) strychnine and quinine, (b) salicin and salicylic acid, (c) borax and boric acid? (8) State what you know of the chemistry of glycerin and of benzene.

Additional questions are also given, at the discretion of the examiner, in prescription-reading and posology. The time allowed for each subject is 2½ hours.

## At the Counter.

THIS IS IRISH.—"Elastic Stocking 16 inches the calf only wanted the leg without the foot." From the same Dublin subscriber come "Ess chicken-pox for toothache," and "Coal man Musther Doyle." Our contributor's signature is "Casque O'Rilla."

DAGONET'S COLLECTION.—In a recent number of the *Referee* Mr. G. R. Sims writes that he was talking to the superintendent of a big "stores," not long ago, and he asked if people did not make odd mistakes sometimes in asking for things. "Indeed they do," was the reply. "We have during the last month been asked for 'Pett Ridge's Food,' 'Linoleum Soap,' 'Biled Beans,' 'Desecrated Soup,' 'Epps's Cocoa for the Hair,' 'Waterproof Toffee,' 'Kew Bridge's Lung Tonic,' and 'Monkey Brandy.'"

A LONDON LOT.—In North London there have recently been demands for "Intellection," "Manor," "crystals for anemia for disinfectionery," "Hode-Conelonge," "and busses pellis," and "shell of the breast." In North-Eastern districts written requests for "licious poder," "quine and dillard sulph acid," "Embeperge to draw worms from the tooth hacke," "Scotch and Nell" (not a variation of "Scotch and Polly"), and "Melezekin" or "Buzelegan" ointment. In the City a well-known firm got a type-written order for "mugs olic acid."

DARTFORD, in spite of the invasion of elegant pharmacy within its borders, cannot give other towns many points in elegance of orders. A pharmacist there sends us a small batch from his collection, and follows them up with an urgent letter apologising for not sterilising them. Number one calls for "Acliptous," which was not a bad attempt at ol. eucalypti; number two speaks for itself: "2℥. Arequa powder for worms in a dog, Collie 12 mts." Then comes the bachelor's friend "Qubug powder," followed by "2℥. hopidoc," and "two 2℥. of oil of glove."

IN SOUTH AFRICA.—The following from Messrs. Mager & March, chemists, Queenstown, Cape Colony, bear, here and there, marks of originality: "A small prescription to make hair fall out"; "One bottle of Case Compound"; "Een botel aconi pillen, een pak seystone-powder, twee poras plasters"; "Peragarick syrup of ouels, seena lives"; "Please seng me som liniment for slooling for my alms"; "3℥. camfere for puting around the throught." A native writes:

Dear sir, my wife is bad for toothache she cant sleep never sir. Please to send her one bottle essence for toothache.

An up-country station-master writes for a small bottle of lavender-water or "Holy Go Legne."



## A Syrian College.

THE principal training-ground for Egyptian chemists' assistants is, as we indicated in the article on Egyptian pharmacy (*THE CHEMIST AND DRUGGIST* July 25, page 139), in Syria. The Syrian Protestant College at Beyrout, regarding which both Mr. Charles Kerr and Mr. T. H. W. Idris made complimentary reference at the meeting of the British Pharmaceutical Conference at Bristol (see *C. & D.*, August 1, page 225), is where this education is given. The College was incorporated on April 21, 1863, under the laws of the State of New York, with a supplementary Act passed by the Legislature in the following year. The corporate name of the institution is "The Trustees of the Syrian Protestant College." The Board of Trustees has charge of all the funds of the College and is the ultimate authority in all the affairs of the institution. This Board is composed of Messrs. Morris K. Jesup (President), D. Stuart Dodge (Treasurer), William E. Dodge, Samuel S. Dennis, Alexander Maitland, and V. Everit Macy, all of New York, U.S.A. The local government of the College is vested in a Board of Managers (of which the Rev. Dr. Howard S. Bliss is the President), and in the Faculty. The College was opened in 1866, a preparatory class having been formed in the previous year. The Medical department was organised and opened in 1867, the Preparatory department in 1871, and the School of Commerce in 1900. The College property is situated at Râs Beirût, on a fine site overlooking the sea, the city of Beyrout, and the long range of the Lebanon Mountains. It includes about thirty-five acres of land, on which thirteen buildings have been erected for the accommodation of the institution. Of these College Hall and Medical Hall were occupied in 1873; the others have been erected at various dates since that time. During the early years of the College, Arabic was the language of instruction in all departments, but in 1880 in the Collegiate department, and in 1887 in the Medical department, this was changed to English, and English is now the medium of instruction in all the departments. The College is divided into six departments. The first is the Preparatory department, which is designed to give a thorough elementary training in the use of the English language, and to prepare students for the higher courses of study in the other departments. The Collegiate department gives liberal education in languages, literature, science, history, and philosophy, leading to the degree of Bachelor of Arts. The School of Commerce is intended to fit students for entrance upon any of the various lines of commercial enterprise, and a degree of Bachelor of Commerce is awarded. The Schools of Medicine and Pharmacy, with which we would more particularly deal, offer thorough professional courses of study in both of these subjects. There is also a School of Bibliographical Archaeology and Philology, to encourage research by advanced scholars from abroad. It will therefore be seen that although the Beyrout College is primarily intended as a missionary enterprise, a useful education in all branches of literature, science, and commerce is given; and that the results—so far, at least, as pharmacy is concerned—are satisfactory is vouched for on the evidence of Mr. Stephenson, of Cairo, and of Mr. Kerr, Mr. Idris and others.

### THE COURSES OF INSTRUCTION.

The College year begins in October, and ends in July. The year is divided into two terms, the first ending in February. Candidates for admission to any department except the Preparatory are required to pay an entrance-fee of "one half-pound sterling." If the candidate actually enters any department, including the Preparatory, this fee is refunded, otherwise it is forfeited. The following is a summary of the fees required in the School of Pharmacy:

Tuition, 10*l.* (in case of graduates from certain specified colleges 5*l.*). Laboratory-fees—chemistry, 20*l.* (two years); zoology, 2 majdies. Board, 12*l.* (at the special table 25*l.*). Room-rent (a place in the general dormitories is assigned free of charge), private rooms, 2*l.* to 5*l.* Graduation-fee for diploma, 5*l.* Two-thirds of the full payment must be paid in advance; the remaining third is payable immediately after the Easter vacation.

English, as we have stated, is the language of instruction in all departments, but there is also a very thorough course

of instruction in the Arabic language and literature for all Arabic-speaking students of the Preparatory, Commercial, and Collegiate departments. There is also a three-years' course in French in the Preparatory department and a three-years' course in the School of Commerce, and a course of three and a half years in the Collegiate department. A course of study in the Turkish language may be had by those who prefer it instead of French, and a three-years' course in German has been introduced in the Preparatory department and in the School of Commerce. The Assembly Hall (of which we show the exterior) is used for daily services and



THE ASSEMBLY HALL.

other public meetings of the College. It has a seating capacity of about 1,000, and contains a pipe organ built by a Manchester firm. The chemical laboratory, which is shown in our second illustration, is situated, as will be seen, in unique surroundings. On the first floor there are laboratories for various classes, a balance-room with microscopes, &c., and the College pharmacy. On the second floor there are lecture-rooms, a research laboratory, photographic dark-room and stock-room.

### THE PHARMACY COURSE.

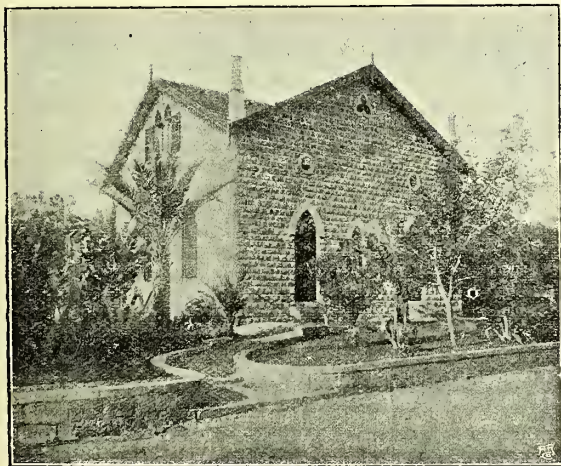
The requirements for admission, the tuition and other fees, and the regulations concerning the examinations are the same in the School of Medicine and in the School of Pharmacy, with the exception that in pharmacy a course of practical work is required. The minimum age for admission to either school is seventeen years, and candidates for admission must pass satisfactory examinations in English, French or Turkish, geography, physiology, arithmetic, algebra, geometry, and physics. All the examinations except those in French and Turkish are conducted in the English language, the ability to use English with ease and correctness being insisted upon as of the greatest importance. The course of study in the School of Pharmacy is graded, and has recently been extended to three years by the insertion of a year of dispensing between the first and third years. This year of dispensing must be twelve consecutive months of work in a reputable pharmacy, attested by certificate, and a practical and faculty examination on the work must be passed before admission to the third year. The course includes chemistry, botany, zoology, materia medica, the theory and practice of pharmacy, and business methods. The course in chemistry extends through the first year, averaging nine hours a week, and including lectures accompanied by experiments, the students spending four hours each week in laboratory-work. In the first term lectures are held six hours a week in inorganic and organic chemistry. During the second term organic chemistry is continued four hours a week in the study of physiological and pathological chemistry, the work being particularly directed to the composition of food and chemical changes in the animal body, such as digestion, the liberation of the tissues, human and animal milk, normal and diseased urine, &c. In analytical chemistry the laboratory-work continues all the year four hours a week. The students are taught in small sections, so that they receive



individual supervision and instruction. The course begins with the analysis of metals and acids, and takes up the detection of the most common medicinal alkaloids and synthetic products, such as antipyrin, chloral, &c.; while special attention is given to urine-analysis both qualitatively and quantitatively. During the past year the chemical laboratory has been enlarged to five times its original capacity. The course in chemistry for pharmacists in the third year is devoted to pharmaceutical chemistry and drug-assaying, industrial chemistry, and to quantitative, microscopical, and urine analysis. The building now contains separate laboratories for the medical, pharmaceutical, collegiate, and commercial classes, and a research laboratory for the teachers and graduate students. These laboratories, fitted with individual benches, with gas and water, are arranged for the best efficiency in laboratory-instruction. A room has also been equipped as a model pharmacy. There is a chemical society in connection with the College, meetings being held fortnightly to discuss the history and discoveries of chemistry and their application to the arts and sciences, with particular reference to the products and conditions of the Levant. Membership of this is optional, and the Professor of Chemistry is the President. The course in botany occupies three hours a week of the first year. Gray's "Lessons in Botany" is the text-book, and Post's "Flora of Syria" is used to study the plants of the country. There are collections of charts and *papier-mâché* models of plants, while much use is made of the microscope, particular attention being given to the medicinal plants of the country. The botany course has recently been lengthened to give time for more practical work. Zoology is taught in the second term of the second year. *Materia medica* is taught for two years, three hours a week, by lectures, &c., and includes the examination of the physical properties and the preparation of drugs, posology, and prescription reading and writing. The *materia medica* cabinet contains crude drugs and official preparations illustrating the British and United States Pharmacopœias. Culbreth's "Materia Medica" is the adopted text-book. A course in pharmacognosy has recently been authorised in connection with this course. The theory and

#### PRACTICE OF PHARMACY,

in which we are mainly interested, is well taught by Mr. Triantaphyllo C. Ladakis, instruction being based upon Remington's "Practice of Pharmacy," supplemented by lectures



THE CHEMICAL LABORATORY

to adapt the subject to the conditions of practical experience in the Levant, and to co-relate various national Pharmacopœias in use in Oriental countries. The seniors have practical work in preparing and dispensing medicine in the College pharmacy, and the classroom work is so arranged as to give them their afternoons free for work in compounding and dispensing prescriptions in the pharmacies of the city. Before admission to the Final examination, each student must present a satisfactory certificate of having had not less than six months' practical work in a pharmacy, three months'

of which must have been in the Long Vacation. This course has of recent years been of great value to Egyptian pharmacy, and much credit is due to Mr. Ladakis for the amount of enthusiasm which he has put into his work, and for the creditable pharmacists he turns out. In the practice of pharmacy and dispensing, the work, according to the latest arrangements, will begin in the first year with both laboratory-work and dispensing in the College pharmacy. This pharmacy is open to the public. The newly established course in business methods is one which it would probably pay more ancient and better-known teaching institutions to follow. Realising, as the Board does, that the successful practice of pharmacy requires a knowledge of business in addition to a thorough professional and technical knowledge, this course has been instituted. It is given to the first-year's student, two hours a week, by lectures, and the course is identical with that given in the School of Commerce—the subjects dealt with being keeping accounts, cheques, drafts, notes, bills, bills of lading, invoices, insurance, transportation, business-letters, &c. The pharmaceutical laboratory adjoins the dispensing-room, where the prescriptions of the College physician are prepared and dispensed. All the work is done by the senior students in sections under the immediate supervision of Mr. Ladakis, who thus demonstrates, and the class puts into practice, the principles taught in the classroom.

The following is a synopsis of the course of study:

#### FIRST YEAR.

*Botany*.—Recitations and lectures, with plant-analysis. Three hours a week.

*Business-methods*.—Lectures. Two hours a week.

*Chemistry*.—Inorganic and organic; recitations and lectures, with experiments before the class. Six hours a week, first term; four hours a week, second term.

Chemical analysis, practical laboratory-work. Four hours a week.

*Materia Medica*.—Recitations and lectures on inorganic and artificial drugs, with preparations and doses of the vegetable and animal *materia medica*. Three hours a week.

Examinations, written and oral, in all completed subjects.

#### SECOND YEAR.

*Zoology*.—Recitations and lectures, with demonstrations. Four hours a week, second term.

*Chemistry*.—Pharmaceutical processes; review of didactic work of first year. Six hours a week, first term; four hours a week, second term.

Chemical analysis, qualitative and quantitative. Four hours a week.

Pharmaceutical chemistry.

*Materia Medica (completed)*.—Vegetable and animal *materia medica*; review of inorganic and artificial medicines; prescriptions; pharmacognosy. Three hours a week.

*Pharmacy*.—Recitations and lectures. Three hours a week.

Practical pharmacy, laboratory-work in the College pharmacy in sections. Two hours a week.

Examinations, written and oral, in all subjects.

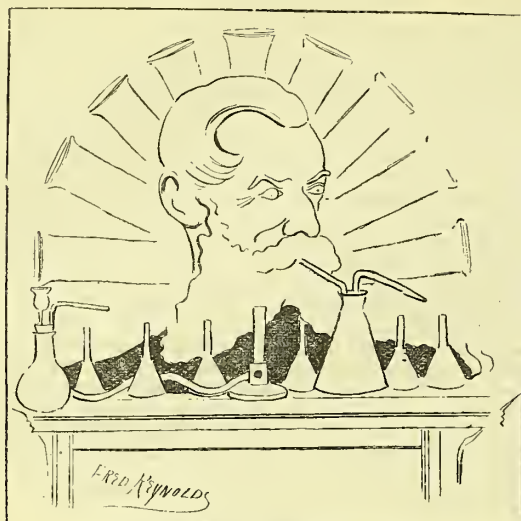
*Text-books*.—Gray's "Lessons in Botany," Post's "Flora of Syria and Palestine," Parker and Haswell's "Manual of Zoology," Simon's "Chemistry," Noyes' "Qualitative Analytical Chemistry," Culbreth's "Materia Medica," Remington's "Practice of Pharmacy."

Students who have satisfactorily completed the course of study and passed all the examinations, written and oral, are given the certificates of studies which entitle them by Vizierial order to appear before the Imperial Medical School at Constantinople for examination for the Imperial diploma of pharmacy. The holders of this certificate are admitted directly to practise in Egypt without further examination. Since the year 1875, 102 students have graduated from the School of Pharmacy. The school was started two years before this, but during the year 1873-74 there were only two students of pharmacy. From that time until 1888-89 the number of students enrolled fluctuated from one to five annually; and from that date, and especially from 1893-94 the number of pharmacy students has gradually increased, and the total number of pharmacy students enrolled for 1902-3 was thirty.

FRANCE annually consumes about 300 tons of citric acid, and exports about double that quantity.



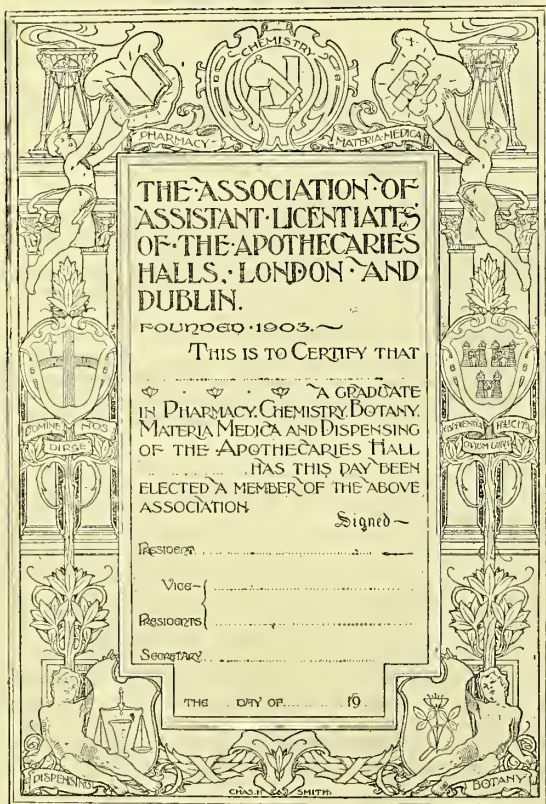
## The Kaleidoscope.



### Beautifying Bloomsbury.

I.

The plainness of the rhubarb building, No. 17 Bloomsbury Square, W.C., irritates the artistic sense of the humble member of the Pharmaceutical Society who contributes the above sketch. It is one of a series of designs which he submits for the ornamentation of the building. The design would be carried out as a fresco above one of the windows, and similar appropriate designs, embodying the features of a well-known chemist or pharmacist, would be placed above the other windows.



### THIS ELABORATE DESIGN

is reproduced from a very large sheet-proof, which the Secretary of the Association sends to us. "Graduates" in

pharmacy, &c., is exquisitely pretentious, and we wonder how the ancient and august Society of Apothecaries of London will feel about being called a "hall." That word properly applies to the shop which the Society carries on.

## Transmuting Silver into Gold.

WE have been assured this week by a gentleman who addressed the annual meeting of the Institute of Journalists that we may, as a rule, take American newspapers seriously, their chief lack being a correct appreciation of perspective. The lack applies in a superlative measure, we feel, to the Sunday editions of the newspapers, which are always entertaining and Munchausenian. In one of the recent issues of the *New York Herald* we find the better part of two pages devoted to "R. M. Hunter, inventor, of Philadelphia, [who] claims to have solved the problem of the alchemists of old," by transmuting silver into gold. An emblematic design incorporates a portrait of Mr. Hunter, a picture of him in his laboratory examining something in an inverted test-tube with a Coddington lens, and a photograph of the converting-plant, which embodies the features of a soda-water machine or liquid-air apparatus, and a steam-hammer. The central figure is a nude lady with leather apron and laurel wreath, who grasps a wrench with her left hand and a steam-valve with the right. An inconsequent tail-piece to the design shows pill-bottles, pomade-hotels, and other containers holding the gold in various stages of conversion. Mr. R. M. Hunter, who receives all this artistic acknowledgment, has been granted 360 patents at Washington, and we are assured that he perfected the Philadelphia trolley system. He is a man of ascetic features, and when he sat for his portrait his eyes looked towards the heavens. His latest invention resembles most that have been recorded in the same line, in so far as he prefers to start with silver, although he says he can also turn copper and lead into gold, but it is more difficult. He makes \$40 worth of gold out of \$1 worth of silver, so that Bryan with his 16 to 1 ratio is quite out of reckoning. The curious point about Mr. Hunter's invention is that he has been working on it for nine years or so, and the basis of it is the theory enunciated by Crookes, Curie, and Houston within comparatively recent date. Mr. Hunter's way of putting it deserves quotation. He says:

The number of ions in an atom of different metals differ and are essential functions of the atomic weights of the atoms of such metals. Thus a silver atom consists of about 75,600 ions, and a gold atom of 137,620 ions, or almost twice as many. As all ions are of the same weight, it follows that the gold atom is almost twice as heavy as the silver atom.

To transform one atom into another it is necessary to destroy the inductional capacity of these ions and bring them to a condition of temporary inactivity or torpor. The ions can then be segregated and forced out of their previous correlation, then re-assembled and re-electrolised, and again put into activity due to the polarisation; and we then have the new atom, with all the basic characteristics of the new metal and its stability.

This can only be effected under certain conditions, for the elementary forces of nature in combination and decomposition are almost irresistible, and hence these forces must be rendered dormant during the temporary moments of transition of the ions. Molecular disintegration and reformation takes place, requiring the destruction of approximately two atoms of silver to produce one atom of gold, and this involves the proper molecular disturbance, coupled with certain chemical and electrical treatment. The results are as sure as the sun which shines above us. The change in crystallisation is due to the orbital change of the ions, &c.

Mr. Hunter has put his theory into practice, and claims success. "For some time he debated if he should merely convert the gold privately for himself, but the process with the machinery is too slow and expensive. With \$500,000 capital he can build adequate machinery, and there will be gold enough to go around."

If Mr. Hunter applies his great mind to the figures he gave the *Herald* man, he will find that he need not seek his half-million dollars from the public. Starting with \$1,000, he can be worth a quarter of a million within twelve months, and if the process is right he can afterwards make that, or any multiple of it, his annual income.



## Observations and Reflections.

By XRAYSER.

### The Paris Pharmaceutical Society

will not have another centenary for some time, and I associate myself with the French correspondent of this journal in regretting that the President of the Pharmaceutical Society of Great Britain has had to decline the invitation to be present at the forthcoming celebration. French pharmacists ought to see that chain. They have always complacently assumed that British pharmacists are an inferior race, but the chain would startle them into a more respectful attitude of mind. Then there is *l'entente cordiale*. Mr. Atkins's "previous engagement" must be a very special one indeed if it is to take precedence of the "entente." Will he not reconsider his refusal? Paris is nearer London than Edinburgh is, and no President would venture to treat the Scottish capital so cavalierly. If it is impossible for Mr. Atkins to go, there are the Vice-President and three ex-Presidents available. One of them should assuredly be present. But whoever goes he must wear the chain.

### Membership

of the Pharmaceutical Society of Paris is somewhat of a distinction. The "resident members" are limited to sixty, and new ones are only admitted by a committee. Besides these there are twenty "free associates," who are gentlemen domiciled in Paris but not necessarily pharmacists in practice. Then there are 100 national and eighty foreign correspondents, who similarly need not be pharmacists. Lastly there are honorary members, and the number of these is not specifically limited. The Society was founded when the Schools of Pharmacy and the whole system of French medical and pharmaceutical teaching was reorganised in 1803. The old school before the Revolution was known as the School of Apothecaries. The Society has no official duties, but it has the use of the handsome *Salle des Actes* in the school for its meetings, which are held the first Wednesday in each month from 2 to 4 P.M. The meetings, like those of many other learned societies in France are open to the public as audience, but the public avails itself very sparingly of the privilege. The French pharmaceutical examinations are similarly open to the public.

### The Ballinasloe Bench

makes a gallant effort to sustain the rather waning reputation of Ireland for illogical humour. Nothing could be happier in its way. Bravo, Messrs. Byrne and O'Shaughnessy. This man Lawrence Connor sold arsenic in the form of Cooper's sheep-dip, and a Saxon analyst comes here and tells us this was contrary to the law in that case made and provided; more shame for the law, then. Besides, this stuff was put up in a packet, and therefore was a patent medicine; and the Act itself expressly exempts patent medicines. Moreover, and furthermore, it was not a medicine at all, at all, and therefore does not come within the meaning of the Act. What's that ye say, Colonel Thornhill? The question is, was it a poison? That's not the question at all, honey. Ye don't see the matter in the roight loight, Colonel, dear. This gentleman is not qualified d'ye say? He's qualified enough to satisfy us, and he's not ninny enough to waste his time by going to Dublin to satisfy some people there. Not he. No, we don't want to hear the other side, professor. We have heard quite enough. Dismiss the summons, Mr. Chairman.

### Norwegian Pharmacy

as described by "Soda Carb." in his interesting sketch furnishes at least one important lesson for British chemists. The price of cod-liver oil at Trondhjem, he found, was equivalent to about 1s. 9d. for an 8-oz. bottle. So far as I can see the chemists about London are charging much about their old prices for the oil and its emulsions. I have seen it marked in 4-oz. and 8 oz. bottles at prices below those quoted in the *C. & D.* market report. This ought to be rectified at once. There is no chance of lower prices this winter at all events, and there need be no fear of the cutters. They cannot buy and sell the true oil at less than the Trondhjem price.

### Riga Balsam

is another item of interest. An ounce bottle of "Riga Balsom og Honning" for 2s., sold as a cough-mixture for children, is not an instance which justifies the allegation that "on the whole prices are somewhat higher than in England." Perhaps with a Government stamp on it would prove effective for English coughs. The honey, at least, would be good. True Riga balsam is the spirit distilled from the cones and young shoots of the Siberian stone pine (*Pinus Cembra*), but Cooley says, "The bottoms of oil of juniper are commonly sold for it in the shops," and I believe tr. benz. co. is sold for it in Scotland. A spirituous solution of balsam of tolu would be a good substitute for it in a cough-mixture.

### The Word Balsam

has a rich old pharmaceutical bouquet about it, though naturally the patent-medicine tribe have spoiled the ancient aroma. It was a familiar term in Latin and Greek, and is believed to have a Semitic origin. Littré makes it a Hebrew compound of Baal and schaman—prince and oil. But the Hebrew word translated "balm" in our Bible was *tsori*, which in Wycliffe's version appears as "sweete gumme" in Gen. xxxviii. 25, and as "resyn" in the familiar passage, "Is there no *tsori* in Gilead?" Coverdale (1535) first gave "balme" in the Genesis translation, but in that from Jeremiah adopted "triacle."

### The "British Medical Journal"

despairs of suppressing patent medicines, and therefore sees no reason why the Revenue should not get some benefit out of them, even if the patients get none. But it has the bright idea of taxing the remedies according to the rate of profit which they yield. But how is this to be ascertained? The *B. M. J.* is at no loss to meet the difficulty. The advertisements are paid for out of the profits, so it would tax the advertisements. Curiously, however, it proposes to exempt from taxation advertisements in the public press, and impose duty only on hoarding-placards. Why the papers should get preferential treatment over the bill-posters is not clear. But there are some patent medicines which the *B. M. J.* would not allow to be sold at all. Among these, apparently, are the "many" whose popularity depends "simply on the fact that they are disguised alcohol in the strongest form." The alcohol must be very much disguised indeed. I know of no single popular proprietary medicine which at all answers to the *B. M. J.*'s description.

In a recent report the Argentine Consul at Dunkirk calls attention to the fact that large quantities of a kind of resin, called in Spanish "Goma Brea," are being shipped from Chili to French ports. It is used as a substitute for acacia, and the plant grows in the forests of Salta and West of Santiago de Chili. The exportation has already commenced on a regular scale, and is likely to show a large development, says the Consul, as it equals acacia in quality, although it is much cheaper.



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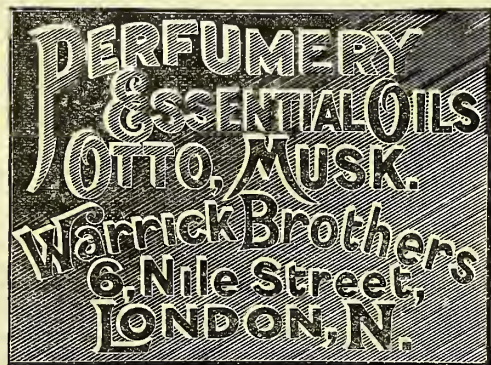
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"It is the cheapest pharmaceutical text-book in the English language, as well as one which physicians and pharmacists could least do without."—*The Chemist and Druggist*, February 25th, 1899.

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## Editorial Comments.

### A Cascara-sagrada Boom.

INTEREST in the London drug-market this week centres round cascara sagrada, which at the time of writing is worth 5l. per cwt. The position is the climax to a condition which has prevailed throughout the year, as may have been noticed from the frequency the item has occurred in our Trade Report. During the past month the situation of the drug has become acute, and signs are not wanting that we have arrived at a period of great scarcity in supply. With every transaction this week a substantial advance has been made, values on the spot being quite 25s. per cwt. higher than when we closed our last report, having advanced from 65s. to 90s., and even 100s. More is now talked of as the price in the near future. The principal cause of the advance, as we have previously pointed out, is the fact that considerably less bark has been harvested. Last week a report was circulated here, on the authority of a New York house, that not a pound of bark is to be had on the Pacific Coast. In all probability this statement is somewhat exaggerated, but it may be taken as an indication of the tense feeling that exists. A few speculators, both in London and New York, have been badly bitten this season, as a considerable quantity of the new crop was sold "bear" last May and June by canned-goods houses in the neighbourhood of 35s. c.i.f. The contracts were mostly for sailer shipment, September delivery, and as practically no new crop has been forthcoming, they have been unable to cover. The buying during the past fortnight has been mostly on account of these defaulting contracts, and naturally spot-prices have gone up with a bound, and it is estimated that sales and resales in one quarter alone amount to over fifty tons. Of course, those dealers who purchased during May and June, and are not consumers, are now able to reap a handsome profit; but as soon as these parcels have been turned over, the market will again be bare, because the bulk of the small crop is being shipped per sailer from San Francisco, and will not be due until January or February. That New York is bare of stock is shown by the fact that



dealers there have been trying to buy in London, cables having been received to "buy and hold for our account," and "buy to cover sales." Consumers throughout the country are also waking up to the fact that they must replenish their stocks, and as usual they prefer to buy on a rising market. There is plenty of cascara sagrada to be gathered in the Far West, but the labour is not available for the purpose. It is said that the number of persons engaged in gathering the bark and other drugs—*e.g.*, senega and golden seal—grows less yearly on account of the increased demand and more remunerative pay for farm labourers at the time when drugs are harvested in the United States. In this connection it may be pointed out that the United States Department of Agriculture has in preparation a bulletin to be distributed to farmers pointing out the desirability of paying more attention to the growing and gathering of crude drugs. The intention is good, but it is unlikely to meet with the approval of farmers whose energies are solely devoted to increasing their wheat area. At all events, the Department's action has little concern for us at the present juncture, for the advanced price of cascara sagrada is merely a question of the supply and demand of the moment. Those of our subscribers who have been so wise as to follow and act upon the advice given in THE CHEMIST AND DRUGGIST market reports have once again made money, and even though they have merely bought for consumption they have the satisfaction of knowing that they have saved a lot.

### The New Attfield.

A FEW weeks ago we were able to announce that the eminent Englishman, whose life has been so closely identified with pharmaceutical chemistry as an investigator and teacher, had undergone a surgical operation, which has literally made a new man of him. It is not unworthy of note that this happy restoration to health of Dr. John Attfield synchronises with the publication of a new edition of his *magnum opus*, known the world over as "Attfield," or, to give the work its full title: "Chemistry, General, Medical, and Pharmaceutical." Besides being a new edition, the book is produced under new conditions, for "the advance of years" (we quote the veteran's words) "has obliged the author, for the first time, to seek the collaboration of an editor, and in Dr. Leonard Dobbin he has had the good fortune to find a colleague whose knowledge of the science of chemistry and its general applications to medicine and pharmacy, and whose enthusiasm were commensurate with the labour involved." On reading those words one almost feels at the parting of the ways, but a lengthy sitting over an advance copy of the volume gives us assurance that while Dr. Dobbin has brought the eighteenth edition as far as facts communicated to the recent meeting of the British Pharmaceutical Conference, he has behaved with affection towards this pharmaceutical inheritance. There are no two opinions in pharmacy about "Attfield," and it has been distinctive in regard to the fact that after it has guided the student through the portal to qualification he has as a business-man used it for reference. "You find things in 'Attfield,'" we have heard it said, "that you can't get in Watts's Dictionary." The dual characteristic was worth preserving, and this Dr. Dobbin has not failed to do, while at the same time he has succeeded in incorporating with practical instruction an exposition of modern chemical theory that covers the requirements of medical and pharmaceutical students. It may not be out of place to recall the fact that the book had its beginning as a handbook of practical chemistry (452 pages), which was published in 1867, before the British Pharmacopœia was of

any account in medicine and pharmacy. The second edition (1869) included the chemistry of the B.P.; and the third (first American edition) was adapted to the United States Pharmacopœia. We described the second edition as "a complete text-book of chemistry, adapted for use as a reading-book, a lecture-companion, and a laboratory-guide." This still applies. To the close of the nineteenth century there were fourteen other editions—eight English and six American. The second edition contained nearly 650 octavo pages, and the bulk grew gradually to 845 pages in the seventeenth edition; but now, in the eighteenth, Dr. Dobbin has succeeded (although extending the index, by 1,400 references, from thirty-eight and a half to forty-five pages) in reducing the size to 808 pages, without sacrificing any but obsolete information. As an example of the manner in which space has been saved we may instance the treatment of the rarer metals. In previous editions these had a section to themselves, with consequent duplication of analytical details which were given in connection with the commoner metals. Now both kinds are put together, with the further advantage that the student gets a complete comparison of all the metallic bases akin to each other. The organic chemistry section of the book has been considerably rearranged, in part to accord with the system of tuition now generally recognised; and it is apparent that much care, time, and attention have been bestowed on the alkaloids, glucosides, and so-called neutral principles in order to bring the text into accord with recent developments. The utility of "Attfield" as a book of reference has depended largely upon the information contained in this section; it has always been precise and to the point, which characteristic is retained with numerous addition, amongst them being notes on alcohol (duty-free), arrhenal, aspirin, dionin, filmazone, heroin, orthoform, persodine, sodium cacodylate, and tetronal, besides many others. The substances mentioned in the Indian and Colonial Addendum to the B.P. have been included. Throughout the analytical sections the tests have been revised, and many new ones added; for example, there is fully a page about persulphates and their analytical reactions, so that the candidates who found these a stumbling-block at the last Galen Place examinations need not be troubled again. The book has been set up in a new type, which is distinctly clearer than that formerly used, and the paper has a whiter surface. It is now bound in green cloth, similar to that of the *Year-book of Pharmacy*. We may add that Dr. Attfield has read all the "proofs" and "revises," and in other respects there has been complete co-operation between Dr. Dobbin and him in maintaining the reputation of the work as "A Manual of the Science of Chemistry, and its applications in medicine and pharmacy."

### "Known, Admitted, and Approved."

THIS may fairly be applied to the scheme which we have devised to meet the requirements of the Board of Inland Revenue regarding the sale by qualified chemists of known, admitted, and approved remedies. From the numerous letters which have accompanied formulas received for publication in THE CHEMISTS' AND DRUGGISTS' DIARY we select the following extracts:

"I thank you for this your latest beneficent task for the drug-trade." (135/48.)

"The thanks of the trade are due to you, and I trust it will be appreciated by a large addition to your subscribers." (131/9.)

"I send you herewith some formulas that have commanded an extensive sale with me for upwards of thirty-three years, and as so many of the poorer patients buy them in small quantities



having only pence to spend, I am anxious not to increase the cost to them of stamp-duty." (119/41.)

"I shall esteem it a favour if you can find space in the 1904 DIARY for the seven formulas herewith enclosed, as our neighbourhood is by no means a rich one, and we have sold these preparations for long periods." (134/57.)

"Thinking your idea of assisting chemists in the difficulty an excellent one, I am herewith forwarding a few formulas, which I have used with success for many years, for inclusion in THE CHEMISTS' AND DRUGGISTS' DIARY, 1904." (134/56.)

"Many thanks for the trouble you have taken in this matter. I suppose some label-house will put suitable slips on the market. There will be, of course, considerable sale for them." (134/55.)

"The idea strikes me as being a particularly good one, and an easy way out of a difficulty." (131/3.)

"A very easy way of getting over an otherwise very apparent difficulty." (131/9.)

"Thanks for the trouble you are taking. The cough-syrup for children is a very nice preparation." (280/3.)

"I shall feel much obliged if you will make room for the following mixtures, which have been in use by me for many years." (135/36.)

"I send the enclosed recipe for diarrhoea-mixture in the hope that space will be found for it in the forthcoming DIARY. It has been found of the utmost possible benefit in the treatment of summer diarrhoea." (128/36.)

"As a very old subscriber (between thirty and forty years), I take the liberty of sending a few formulas; probably you may be able to pick out a few that are original. Many of these I myself have been preparing for over forty years. We have a number of counter-adjuncts, most of which are covered by 'Pharmaceutical Formulas' or the thirty odd years or more of DIARIES we have. The trade is deeply indebted to you for the vast amount of trouble you are taking in this matter, which, in my opinion, will, after a little vexation and worry, be a material benefit to us generally." (132/31.)

"Enclosed I send half-a-dozen approved formulæ—approved, that is, by the inhabitants of this district—in the case of two of them for over sixty years, the others for twenty-five years. Your idea is excellent, and more than deserves success." (134/64.)

"I am very glad to avail myself of your offer to insert formulæ in the DIARY. The way out of our difficulty has been ably met by you by this offer, so many of us not being inclined to go in for a new set of labels when the present ones are moderately well known amongst customers." (134/90.)

"I enclose five formulas for insertion in THE CHEMISTS' AND DRUGGISTS' DIARY for 1904. The publication of same must entail a lot of care and trouble on your part. Chemists and druggists throughout the land, I am sure, much appreciate your efforts on their behalf through the new stamp regulations. In return for the 10s. a year subscription to the *C. & D.*, your action in publishing the formulas of chemists' proprietaries will save them several pounds a year." (136/11.)

Other subscribers in Great Britain who desire to take advantage of this scheme will find in our issue of August 29, pages 415-416, a form upon which they may send formulas. It is desirable to note that the collection will not include formulas for toilet-articles, nor what are legally known as proprietary articles or nostrums. The latter and other medicines which are at present stamped cannot benefit by the exemption. Our collection should include chiefly the formulas for medicines which have hitherto been sold under ailment-names, and which, in consequence of the ruling in *Ransom v. Sanguinetti*, will become dutiable on December 31, 1903, but which, under the special exemption applicable to qualified chemists, may be sold unstamped by them provided an adequate indication of the ingredients of the medicine is printed on the label, or that such medicine is prepared according to a formula published in, e.g., THE CHEMISTS' AND DRUGGISTS' DIARY. We are classifying the formulas we are receiving, and it will be of assistance to us if subscribers interested would fill in and send the pages referred to as promptly as possible.

We call attention here to several legal points which have been raised by correspondents, and which are dealt with on p. 441.

#### Lead in Acetic Acid.

We print on page 436 a note by Mr. C. T. Bennett, of Messrs. Wright, Layman & Umney's laboratories, in which he records the fact that commercial acetic acid contains a

trace of lead. The quantity present escapes the pharmacopœial sulphide-test, as sulphuretted hydrogen does not indicate its presence until the acid is neutralised. Inquiry shows that the most likely source of the lead is the bottles or carboys in which the acid is sent out, and it is to be hoped that manufacturers will follow the B.P. injunction under liq. ammon. acet., to put it up in green-glass bottles. The amount of lead present is not of real therapeutic importance, but if the acid can be had perfectly free from the metal, it is as well that pharmacists should have it so.

#### Not-liable Labels.

The following are copies of labels which have recently been marked "not liable to duty" by the Board of Inland Revenue:

#### WINTER TABLET

For chaps and abrasions.

#### TASTELESS LITTLE PILLS.

Gently aperient.

Do not gripe or cause any ill effects.

#### TONIC DIGESTIVE GRANULES.

Not for Liver Ailments,

but as a mild aperient Stimulant.

At the same time a "Female-pills" label was sent, but it was returned unmarked, the "liable" stamp being placed on a label which, the covering letter stated, the Board would not express an opinion upon. We think, therefore, that the Board meant to mark the "Female pills" label as liable.

#### The London Chamber of Commerce.

Mr. A. Zimmermann in his Press letter about foreign trade, to which we referred last week, wrote the following pretty paragraph:

I am surprised that not one of the merchants of London has come forward with this statement of facts, but the reason for this may lie in the fact that foreign trade is a very energy-absorbing work for many, and others pay little attention to politics. It would, however, be a very great mistake to assume that the London Chamber of Commerce is representative of the trade of London. That is not so, although some firms may methodically continue their subscriptions. This institution has failed in its mission, and is looked upon as a private debating society apt to do mischief to the real interests of London.

It was not to be expected that this criticism would pass unchallenged, and Mr. Thomas Tyrer provided the needful reply in a letter written on August 28, wherein he said:

Mr. Zimmermann's reference to the London Chamber of Commerce, of which, I believe, he was once a member, seems hardly relevant to the issue he has raised. Can he mention any other institution which is more representative than the Chamber, or whose members are more typical of all classes of the business community than the 3,800 merchants, manufacturers and traders, bankers, shipowners, agents, and brokers included in the Chamber's membership? . . . The Chamber is often resorted to for advice and information on trade-subjects by Government Departments and even traders generally, and is a constant intermediary between individual traders like Mr. Zimmermann and such departments in connection with Customs and other difficulties where they cannot help themselves; for instance, in obtaining remissions of unjust fines, such as under the French *expertise* system, not to speak of consultation with the Inland Revenue Department in the matter of the regulations for drawback on export of spirituous medicinal preparations.

More than this is said, of course, but the weak spot of the Chamber is not exactly touched by either letter-writer, which is that members of the Chamber attached to the chemical and drug trade sections do not pay attention to the business undertaken worthy of a real live body. Why is this?



### The Sale of Disinfectants.

There is an article in the last issue of *Advertising* which professes to give the opinion of chemists on the sale of disinfectants. As far as can be gathered from the various and diverse views, the two best-selling lines are Sanitas and Condy's fluid. The first is favoured both by the retailer and the public, and Condy's, in favour with the public, is in disfavour with the trade, owing to the extent to which the price of that article is cut. "A 1*l*. worth of permanganate of potash bears, if anything, more profit than a 10½*l*. bottle of Condy's, and it is not likely we push Condy's," is what one of the retailers writes. Jeyes' disinfectant, according to several views, is much favoured by fanciers, but wants more push in its advertisements. Izal in some parts has no sale, or is in very little demand, but in other places sells well. These are only a few of the very contradictory views expressed on the sale of these disinfectants, but each of the makers will be able to pick out paragraphs in favour of his article, and that is probably one of the ideas of the series of opinions.

### Bunt and Smut in Cereals.

In a leaflet to agriculturists issued recently by the Board of Agriculture the question of bunt and smut in cereal crops is dealt with, which will shortly be of practical interest. Treatment of these fungus pests to be effective must, it is said, be applied to the seed previous to sowing. In the case of wheat, the most approved "steep" or "pickle" consists either in pouring the grain into a barrel or other receptacle containing a ½ per cent. solution of copper sulphate and leaving it there, with frequent stirring, for twelve to sixteen hours, or in spreading the grain on a floor and sprinkling with a 10 per cent. solution of the same chemical. The latter is the method most commonly practised in this country, the mode of procedure being to empty a sack of grain on a wooden floor and to water it with 1 gallon of water in which 1 lb. of bluestone has been previously dissolved. The seed should be turned during the progress of the operation, and thereafter it should be turned two or three times, after which it is spread out in a thin layer till it is dry enough to sow. The same method will serve in the case of seed barley and oats, but preference is given to the Jensen system, in which the grain is steeped for about six minutes in water at a temperature of 130° to 135° F. In recent years success has attended the application to seed oats and barley of a solution of formalin, used at the rate of one pint of 40 per cent. formalin to 36 gallons of water. The seed is placed in a bag and dipped into the solution, where it is allowed to remain for ten minutes, being afterwards spread out to dry. One pint of formalin, costing about 2*s*., is sufficient for the treatment of 40 or 50 bushels of seed. If the microscopic spores of bunt and smut are not destroyed in the seed grain, the risk incurred is that the fungus will grow up within the cereal plant and eventually destroy the ear and grain.

### Ibsen, the Pharmacist.

The August issue of the *Bookman* is an "Ibsen" number. It teems with photographs of the master and pictures of places with which his name is associated. We published twelve years ago (*C. & D.*, March 14, 1891, page 363) a short record of Ibsen's association with pharmacy, and in the biographical sketch given in the *Bookman* there are few further particulars. It appears that Ibsen's great-great-grandfather was a Danish skipper, who settled at Bergen. His great-great-grandmother, his great-grandmother, his grandmother, and his mother were none of them Norwegians, but the great dramatist himself was born in the small Norwegian town of Skien. When Ibsen was eight years old his parents went to live on a small farm, Venstøb, outside Skien,

and it was in these places that probably were impressed upon his youthful mind the dismal and sombre teachings that characterise his writings. At the age of fifteen Ibsen was apprenticed to Reimann, an apothecary at Grimstad, a small town of about eight hundred inhabitants. There he remained for more than five years. Like most towns in Norway east of Christiansand, says the chronicler, Grimstad is a small seaport, well-to-do and substantial. In such a town there is but one club, one apothecary, one barber, and one inn. The apothecary's shop is the "Exchange," where all the idlers of the place meet to discuss the events of the day. While at Grimstad, besides his first drama, *Catiline*, Ibsen wrote a number of verses, to do which he must have burned much midnight oil. For not only had he to attend to his work, but he had to prepare for his forthcoming examination, the first and necessary step to the study of medicine. "Some of his verses at that period," continues the biographer, "betray a dreamy, melancholy resignation with his lot; in most of them, however, are signs heralding the Ibsen of coming years." To those of us who can recall our apprenticeship days, this may seem a normal condition for a pharmacist's apprentice, but the biographer is not a pharmacist. In March, 1850, Ibsen went to Christiania "with a few daler in his pocket" to finish his studies for his entrance examination to the University. To that end he went to a school kept by Heltberg, a well-known crammer. Heltberg was a gifted and original teacher, and after a hurried preparation at this "student-fabrik" (cramming shop) Ibsen passed his only academic examination in anything but a brilliant manner, his Latin, Greek, and mathematics being notably bad. It appears that almost immediately afterwards he made up his mind to abandon the study of medicine in order to follow a literary and public career. His association with pharmacy was thus of the briefest, but it would be interesting to determine what influence those five years of drudgery at Grimstad had on the evolution of his morbid philosophy of life.

### Another Cancer-cure.

Probably the latest cure for cancer hails from Berlin. Dr. Julius Gnezda, in the course of his investigations of the ravages of this dread disease, has observed the beneficial effect of Fowler's solution on patients with cancer of the stomach, already observed and recorded by other physicians; the retention of chlorine in the tissues of such patients; and the good results obtained when he treated patients with albuminous matter that contained phosphorus in an organically combined form. Dr. Gnezda thereupon set to work to prepare a compound containing the underlying principles of these therapeutic actions, and "Akarkine" (which is patented) is the result. Two hundred grams of white of egg is treated with 40 grams of anhydrous phosphoric acid in successive portions. To the product when cold 20 grams of arsenic trichloride is added. After the addition of water the precipitate is washed out until the wash-water gives no reaction for arsenic or for phosphoric acid. The precipitate is then washed with alcohol, dried, and powdered. The finished powder is insoluble in water and in weak mineral acid, but is soluble in alkali. It is said to be acted upon by the gastric juice and to be readily digested by it. An analysis of "Akarkine" shows a proportion of 4.23 milligrams of arsenic in 1 gram, one atom of arsenic linking with one molecule of albumen. The new remedy is being tried in the clinic of Professor Ernst von Leyden in Berlin, and reports of good results from its use are already forthcoming. So that in process of time we may expect another addition to the already long list of insufficiently tried and "patent" medicinal remedies from Germany which the long-suffering pharmacist will have to take temporarily into stock.



## The Apprentice Question.

By A. L. TAYLOR, Pharmacist to the Bristol Royal Infirmary.

THE pharmacist of the present day is confronted with problems many in number and diverse in nature—to mention a few examples, amendment of poison-laws to suit parliamentary agitators appointed to Commissions in the results of which they are themselves directly and financially interested; the Medicine-stamp Acts, and curricula, concurrent and otherwise, &c.

The particular problem, however, with which I propose to deal is one which concerns us as much individually as collectively—I mean the apprentice question. How serious a matter this is one can readily judge from the advertisement columns of the *C. & D.* The question is this—if this dearth of apprentices continues, where are the pharmacists of the future to come from, for even a drug-store needs qualified assistants. Allowing that it is difficult for the single-handed pharmacist to provide practical instruction for his apprentice, and the great dispensing-houses no longer keep apprentices, where are the pharmacists of the future to get their training? To produce a good assistant two distinct types of education and experience must be provided:

(1) *Professional*.—By this I mean the style of work prescribed by the Minor regulations in intention, if not in actual syllabus, a thorough training in galenical and chemical methods, and an ability to apply the theory of chemistry, pharmacy, and materia medica to the practical demands of the pharmacy.

(2) *Trade*.—In this category I include an ability to serve customers with politeness and courtesy unmingled with servility, a knowledge of prices and general sundries usually dealt with in the pharmacy, and a knowledge of book-keeping.

The second type can undoubtedly be only obtained in a pharmacy either as apprentice or improver, but I would suggest our provincial hospitals, possibly also the smaller metropolitan ones, as a field hitherto very slightly utilised, as affording an excellent training-ground for acquiring an education in type No. 1. Whether it pays the ordinary pharmacist to prepare his own galenicals or not, there can be no question as to the great gain to a public institution in making galenicals. The only difficulty is that of additional expense in labour. One or two apprentices, well and systematically trained, go a long way towards a solution of that difficulty.

To deal more in detail with the apprentice, I should like to emphasise the following considerations:

1. *Personality*.—Unfortunately the tendency is in the present dearth of apprentices to take any applicant who presents himself. The writer, when recently advertising for an apprentice, received applications from, amongst others, a servant-girl, an errand-boy, and a German Jew; the last-named brought with him in a leather bag the premium asked, and was only with difficulty convinced of his unsuitability. A well-educated youth of good presence and address stands an infinitely better chance than an ill-mannered, perhaps illiterate, person who has to be taught the rudiments of manners before those of chemistry.

2. *The Preliminary*.—It is extremely desirable that this Rubicon be safely crossed before setting afloat on the troubled sea of Minor work; it is also some small guarantee to the pharmacist of the mental capacity of his future apprentice.

3. *Education*.—Here I am on dangerous ground. The single-handed pharmacist, harassed by stores competition, can hardly be expected to find time to instil pharmacy or aught else into his apprentices; and yet an effort to do so is amply repaid by its effects both on master and apprentice. Some such scheme of work as that suggested by Mr. Wippell Gadd in his paper at the Bristol Conference might be adopted. In the majority of towns the chemistry and botany can be provided for at the local college or technical school, that part of the sciences more directly pharmaceutical being easily supplied by "Attfield" and a little personal explanation. The instruction in pharmacy and materia medica it should certainly be within the scope of any ordinary pharmacist to impart. Even the single-handed pharmacist has his quiet hours in the day, when a timely hint to the embryo phar-

macist at the back counter on the *pharmaceutical* method of preparing his mist, cret. arom. or inf. calumb. costs him very little, and will be much appreciated by the recipient. At any rate, the pharmacist will be acting honourably towards his juniors, and this can hardly be said of the individual, so well known to all of us, who works his apprentice from 8.30 A.M. to 8 P.M. at counter-scrubbing, bottle-washing, &c., and never gives a thought to the future, intellectual or pharmaceutical, of his lads.

I often hear it said that it is impossible to get premiums paid with apprentices nowadays. The writer's own experience is that apprentices *are* procurable when good and continuous attention is paid to their education.

## Lead in Acetic Acid and Ammonium Acetate.

By C. T. BENNETT, Pharmaceutical Chemist.

THE object of this note is to call attention to the fact that practically all commercial samples of acetic acid contain traces of lead. This is not evident until the acid has been neutralised, when the reaction with sulphuretted hydrogen is very marked, although the colouration produced in the acid itself is barely perceptible. The reaction is particularly noticeable in the concentrated solutions of ammonium acetate (1 to 4 and 1 to 7) of trade, a number of samples of which I have recently examined with a view to determine the proportion of lead present. Although the quantity of lead in the worst sample did not exceed 1 in 10,000, this proportion appears somewhat alarming, unless one takes into consideration how small an equivalent of these concentrated solutions is generally taken.

That the colouration with sulphuretted hydrogen is due almost entirely to traces of lead I have been able to prove by collecting the precipitate of sulphide thrown down on heating, and obtaining from it the characteristic precipitates of iodide and chromate of lead. The proportion of iron is negligible.

It is a well-known fact that solutions of acetate and citrate of ammonium have the power of abstracting lead from glass vessels in which they are stored, and a warning sentence is inserted in the Pharmacopœia as to the necessity of using green-glass vessels. White glass should especially be avoided, as it contains appreciable quantities of lead.

It was thought possible that the contamination with lead might be due to the vessels used in manufacture. Various samples of acetic acid were therefore neutralised in green-glass vessels with carbonate of ammonia, and the sp. gr. of the finished product adjusted to a definite figure. It was then found that the proportion of lead varied slightly in different samples, but none could be obtained lead-free. As we understand that no lead-plant is used in the preparation of acetic acid, it would appear that the source of the contamination is the storage-vessels (usually carboys).

In these days of almost excessively high standards of purity and continual striving to attain perfection, it should not be impossible to obtain lead-free acetic acid, or at any rate to reduce the proportion of lead to certain limits.

Extending my experiments to hydrochloric and sulphuric acids, neutralising equal weights of ammonium carbonate and making the neutral solution up to a definite volume, I found that while the hydrochloric acid was practically lead-free, the sulphuric gave a distinct reaction for lead, though rather less than its equivalent of acetic acid.

The method I have adopted for the estimation of the proportion of lead consists in matching the colour produced by 1 c.c. of neutral acetate solution and 40 c.c. of solution of sulphuretted hydrogen, with a standard solution of lead acetate under the same conditions, using Nessler glasses. A close approximation can be thus obtained.

It is expected that in the near future rubber will prove one of the most valuable crops grown in Ceylon. First-quality Ceylon from Pará seed is now worth on the London market from 3s. to 4s. 6d. per lb., the latter price being recently paid for "fine biscuit." This exceeds the price paid for "fine Pará" rubber.



## Veterinary Notes.

By M.R.C.V.S.

### Splints.

**H**ORSES are subject to a variety of troubles in connection with the bones, and to none more frequently than to those called "splints." It will be remembered that a thin wedge-shaped bone is found on each side of the cannon or long round bone, extending from the knee to the fetlock.



FIG. 1.  
COMMON SITES  
FOR SPLINTS.

Their position as supports (fig. 1) doubtless gave them the name of splint or splent bones—the word is spelt both ways, or was until quite lately. According to Professor Flower and other paleontologists, the splint-bones, as we now know them, are the remains of what were once other digits. The Anchitherium, the Hipparion Gracile, and other antediluvian creatures which are, by authorities on evolution, held to be the ancestors of the horse, had the lower portions of the limbs like those of our present-day pigs. Be this as it may, the splint-bones are so commonly found to be inadequate to the strain put upon them when horses are first put to work, that inflammatory action is set up, and results in strengthening the long thin bones on the sides of the great shank-bone. The product of inflammation is called after the bone upon which it forms—that is to say, splint or "a" splint.

We are told by a customer that he "wants a blister as he has a young horse that has thrown a splint." Old ones do so sometimes, but it is quite a common defect of horses' legs during the first year or two of their working-lives. It is during its formation, too, that an ordinary splint causes lameness; it might, otherwise, escape attention. Bone is covered with a dense membrane, called periosteum, and from this investment the growth takes place, not from the centre. It is a strain or blow upon the periosteum that sets up inflammatory action and results in a deposit of ossific material upon the outer (splint) bone, or between the splint-bone and the cannon or shank bone. Though regarded as a disease or defect, enough has been said to show that it is one of Nature's ways of strengthening a structure found to be incapable of sustaining the wear and tear to which it is subjected. This being so, it will be readily understood how it is that the small-boned "over-topped" foreign ponies brought to this country are rarely found without one or more splints, and often two or more on one leg. If it is a curative or preventive effort on the part of Nature, one may ask, Why interfere with it?

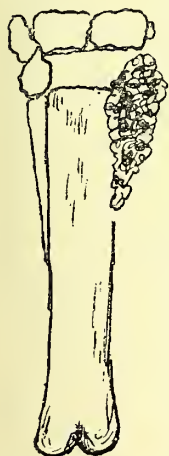


FIG. 2.  
A KNEE-SPLINT.  
(INCURABLE.)

The chief reason for doing so is to remove the consequent lameness at the earliest date and restore the animal to usefulness. The next is to arrest the growth of any more material than is absolutely necessary to give the support that was found wanting. A further motive in controlling the amount of the deposit is to avoid encroachment of a hard bony growth upon the soft structures of the leg whereby they would be injured. Nay, it is not enough that a splint should be kept out of the way of tendons and ligaments which play against the cannon-bone; they will sometimes develop in the direction of the knee-joint, as seen in fig. 2, and result in ankylosis of that most important portion of the horse's leg. Such a case as that depicted in the drawing is quite hopeless, yet it may have had its origin in a small splint such as we see upon the upper of the two in the other drawing. There is an analogy between the formation of

splints in horses and the union of broken bones. A superfluous amount of material is brought to the broken ends of a bone and holds them together until a satisfactory union is effected; then a process of absorption instead of deposit goes on, or a "callous" is left, which lames the patient by reason of its impingement upon the soft structures. So with the splint; a sufficient deposit will be sure to take place. Our object is to prevent an enlargement which will be at least unsightly, and perhaps a cause of unsoundness.

The lameness induced by a splint is unlike that of foot-soreness. A splint-lameness comes on while a horse is on the road. He may have started on a journey quite sound, and suddenly fallen lame or become increasingly so as he progressed. Foot-lamenesses usually grow less acute or are altogether thrown off with exercise.

*Treatment.*—If we are asked to prescribe for a horse that has but just fallen lame, we do well to prescribe a dose of "physic" proportioned to the animal's age, breed, &c., and the application of warm bandages or cold lotions of ammon. hydrochlor. "Opposite prescriptions" someone says, but in practice the same results are obtained, and a good deal of ink has been employed to satisfactorily account for it. When the first acute symptoms have passed off we advise a blister, that panacea of the veterinarian. But it is good treatment, and has the approval of both theory and ages of practice. What blister shall we employ? A biniodide by all means. For bony deposits it has been found that hyd. biniod. is more immediately beneficial, and promotes absorption long after all external signs of vesication have passed away.

Of what strength shall we use it? If a well-bred light horse with a thin skin, one in eight or ten of azepts will be strong enough, but in the case of a heavy shire horse, or coarse-bred animal, one to six or seven. Clipping the seat of lameness looks more workmanlike, but is not necessary; only a little more ointment and extra rubbing are required if not clipped.

The veterinary prescriber should never forget the question of control. So many amateur blisters result in injury to the patient through omitting to tie up the animal's head while annoyed by the pain. Some horses will rub their eyes into a blistered leg and do irreparable mischief, while quite the majority will get a sore muzzle if allowed to have their heads free. The morning is the best time to blister. The patient should be secured on the pillar-reins and visited from time to time. By night the acute pain has subsided, and the animal can be left with safety. It is important to secure a rest for the patient afterwards—the longer the better.

### Luxation of the Patella

is a common ailment in foals. It is a jumping-in and out of the round bone corresponding to the knee-cap in the human being. In very young foals, where the tissue is plentiful and loose, and the ligaments are soft and elastic, it is possible that the clicking sound caused by the joint going back when walking may not be heard. Such colts should be kept on level pastures, as steep hillsides tend to aggravate the evil. The best treatment is the application of a blister. This restricts the movements and fills up the spaces with fluid, which in turn acts as a cushion and support to the weak parts while they are developing. The blister should remain on until the new coat carries it away, and should be renewed unless the animal has completely recovered.

### Tapeworm in Lambs.

A writer in the *Farmer and Stockbreeder* says that the best treatment for this malady is to fast the lambs in a building for twenty hours, then give a dose of castor oil and linseed oil equal parts, enough to act as a gentle aperient. Three hours after give a drench to each, composed of:

Powdered areca nut...	...	...	3ij.
Oil of turpentine ...	...	...	3ij.
Skim milk ...	...	...	3iv.

Mix.

After an hour's interval drive the lambs slowly for half an hour where what they pass can be seen. Repeat this in ten days if they do not seem to pick up rapidly. These worms have an intermediate life in small molluscs (slugs), and should be destroyed at this stage in the pasture. A heavy dressing of salt and soot is the best preventive.



## Trade-marks Applied for.

Objections to the registration of any of the undermentioned applications should be lodged with C. N. DALTON, Esq., C.B., Comptroller-General of Patents, Designs, and Trade-marks, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C., within one month of the dates mentioned. The objection must be stated on Trade-marks Form J, cost £1, obtainable through any money-order office.

(From the "Trade-marks Journal," August 19, 1903.)

- "PERFECTOSE" and picture of applicant ("Perfect" disclaimed); for an embrocation and preparation for the feet and skin. By A. E. Walters, 15 Great Marlborough Street, London. 254,394.
- "IDOKELBENE" and signature on label; for a liniment. By A. M. Stewart, "Tighdeargh," Blairgowrie, N.B., and 3 Raffles Place, Singapore. 255,078.
- "ANTIGOTIN" and combination of devices ("Anti" disclaimed); for chemicals and for mineral and aerated waters. By the General Chemical Company (Limited), 57 Chancery Lane, W.C. 255,142 and 255,144.
- "SAMMEUP"; for medicinal powders. By C. S. Tallant, 17 Blenheim Place, Blackman Lane, Leeds. 255,932.
- "REUNOL" and combination of devices; for medicinal preparations. By J. A. Gatehouse, 15 Methley Street, Kennington Park Road, S.E. 255,600.
- Picture of "20 MULE TEAM BRAND"; for chemicals and for foodstuffs. By Borax Consolidated (Limited), 77 and 78 Gracechurch Street, E.C. 256,214 and 256,215.
- "MARMIN"; for a condiment. By G. S. Martin, 119 Portland Road, South Norwood, S.E. 255,210.
- "FLORINA"; for food preparations. By De Vyner et Cie., 39 Cadogan Street, Glasgow. 255,880.
- "FLAVAL"; for detergents. By J. Duncan Best, Minoco Wharf, West Silvertown, E. 255,969.
- "PULWARI"; for perfumery and toilet articles. By J. A. H. Burn-Murdoch, 32 Upper Bedford Place, Russell Square, W. 254,407.
- Applicant's name; for goods in Class 48. By E. Le Clerc, 43 Holford Square, W.C. 255,340.

(From the "Trade-marks Journal," August 26, 1903.)

- Picture of mule-team and wording "20 MULE TEAM BRAND"; for chemicals, detergents, oils, &c., and perfumery. By Borax Consolidated (Limited), 77 Gracechurch Street, E.C. 256,213, 256,216, and 256,217.
- Facsimile signature of the applicant firm; for Hammond's Remedy (vermin-killer). By G. C. Andrews & Son, 2 Lausanne Road, Peckham. 248,538.
- Combination of devices and facsimile signature of applicant; for "Elsa" veterinary preparations, for medicinal preparations for human use, and for perfumery. By E. V. Feller, Croatia, c/o H. Haddon & Co., 18 Buckingham Street, Strand, W.C. 252,918, 252,919, 252,920, 252,921, and 252,922.
- Combination of devices, figure, and word "3 TIPS"; for veterinary chemicals. By B. C. Tipper & Son, 43 Homer Street, Balsall Heath, Birmingham. 253,146.
- Device and the word "HAMMER"; for dog-pills. By M. W. Carr, 79 Oakworth Road, Keighley, Yorks. 255,761.
- "SUBCUTIN"; for a medicine. By Dr. E. Ritsert, Frankfurt-on-Main, c/o Johnsons & Willcox, 47 Lincoln's Inn Fields. 255,643.
- "SETTLER"; for chemicals. By J. Knight & Sons (Limited), Victoria Docks, Essex. 255,787.
- Facsimile signature of applicant; for medicinal preparations. By S. Johnson, Summer House, Wrine Hill, near Crewe. 255,793.
- Eagle device; for Roubaix turpentine. By the Société Chimique Roubaissienne, Uxbridge Road, Southall, Middlesex. 252,470.
- "KOSMOGRAM" (no claim for "Kosmo"); for scientific instruments and apparatus. By G. Scott & Co., 21 Southampton Row, Holborn, W.C. 254,753.
- Combination of devices; for vaccine and other sera. By the Incorporated Liverpool Institute of Comparative Pathology, Crofton Lodge, Runcorn. 255,428.
- "SEMIRAMIS"; for detergents, soaps, oils, &c. By the United Alkali Company (Limited), 30 James Street, Liverpool. 255,548.

- "BILBERADE" (no claim for "Bilberry"); for goods in Class 44. By S. H. Ward, 48 Cranmer Street, Nottingham. 255,629.
- "HAZELINE" SNOW" ("Hazel" disclaimed); for a toilet-preparation. By Henry Solomon Wellcome (trading as Burroughs Wellcome & Co.), Snow Hill Buildings, E.C. 255,933.
- "NIZO"; for goods in Class 48. By Schülke & Mayr, Hamburg, c/o Haseltine, Luke & Co., 45 Southampton Buildings, W.C. 255,939.

## The London Minor,

AND HOW TO WORK FOR IT.

I HAVE just passed the Minor examination; and having been compelled to do it entirely by myself, perhaps my experiences would be interesting to those who are still studying to obtain the much-coveted certificate. I entered the business very young, passing the Cambridge Local examination just before leaving school, this certificate afterwards serving in lieu of the Society's Preliminary. After serving an apprenticeship in a small country town I moved, about five years ago, to a larger town. Then the seriousness of the Minor examination began to dawn upon me, and I set to work in earnest. There were classes under the Science and Art Department in the town, and these I took advantage of. The first year I took theoretical and practical chemistry only. During the summer following I began a little botany, and the next winter session took classes in theoretical and practical chemistry and botany. After these were over I kept up botany and started materia medica. I had a good Southall's Materia Medica Cabinet given me, and with the help of this and a text-book I managed to get a very good insight into this subject. At the end of the summer, and not having much dispensing where I was engaged, I moved to a much larger town where there were good Science and Art classes, and where I ultimately gained a very good dispensing experience. The first session I took theoretical and practical inorganic, and also elementary organic chemistry and botany. I had to arrange with my employer for time off to attend these. During the next summer I went on with materia medica and began a systematic study of the B.P., also not forgetting my Latin, which I studied from "Ince." The next winter session again found me doing inorganic and organic chemistry and botany, and at the end of the session a physics class was held, which I attended. During this session I gave up my half-holiday to work at practical chemistry, doing volumetric as well as analytical work. I then attempted two or three of the competitions in the "Students' Corner," and found them exceedingly good practice, the small quantity sent for analysis making one extremely careful and observant. Though I was not successful in winning a prize in the "Corner," I came out very creditably. At the conclusion of the classes I started working steadily through the Minor syllabus, going into every detail as far as I was able. By this time I had obtained a very good groundwork of the requirements of the Minor, and was persuaded that after a course of study at a school of pharmacy I should have every chance of success. My next move was to one of the London schools of pharmacy, having been careful to save enough money during my assistantship to cover the expense. I worked very hard while in London, and the time seemed to pass quickly until the day arrived for me to present myself at Bloomsbury Square. In practical chemistry I had to identify a metallic salt and an oxide prepared from it. This turned out to be mercuric chloride. For volumetric I had a solution of chloride of sodium to estimate with solution of thiosulphate of sodium. At dispensing I had pills to make and silver, a mixture with a decoction in to make, suppositories, a blister for the right ear, and 100 c.c. of syr. ferri phosph. In two days I received my notice for the oral. During the ten days that elapsed I worked hard recapitulating all the work, mostly from my notes. I did no work the day before going in, and felt pretty fit. My first subject was prescription-reading, which occupied about twenty minutes. Then came pharmacy, in which the examiner concluded by saying he was very well satisfied, and the same compliment I received in my next subject—chemistry. Materia medica and botany were soon over, and I had to wait about ten minutes before I was called up to shake hands and be congratulated by the President. (24/56.)





**TO CORRESPONDENTS.**—Please write clearly and concisely on one side of the paper only. All communications should be accompanied by the names and addresses of the writers. If queries are submitted, each should be written on a separate piece of paper. We do not reply to queries by post, and can only answer on subjects of general interest.

#### The Therapy of Treacle.

SIR,—One of your medical contemporaries had an article in a recent issue showing that a poisonous alkaloid—betaine—has been proved to exist in beetroot, and more especially in the commercial products of that article. In another place the journal ridicules a paper which had reported cases of cancer of the stomach as relieved by taking treacle. Now, if these two statements had been carefully collated, it would not have appeared incredible that cancer should be relieved by treacle. Every pharmacist is aware that treacle possesses a marvellous power as a sedative in cases of cough, and as an analgesic in colicky complaints, and not a few of the most popular patent medicines in the market are largely compounded of it. Few had the temerity to claim any special therapeutic virtues for what seemed a mere by-product of sugar, and, although experience proved its utility, the credit was usually given to some of the other drugs generally prescribed along with it. Now, the latest scientific investigations go to prove that crude treacle contains an alkaloidal product whose properties are allied to those of thebaine, and thus the belief so long held that treacle had other properties than those of a sweetener is amply vindicated.

Yours truly,

Dublin, August 18.

J. C. MCWALTER.

#### The Mitcham Peppermint-crop.

SIR,—We were sorry to see in your issue of last week a report on the Mitcham peppermint-crop which is somewhat misleading. As your valuable paper is the principal one representing the drug-trade throughout the world we are convinced that your desire is to supply only reliable information therein. May we therefore be allowed to make a few remarks upon the matter? We think we may claim to speak with some authority on this subject, being the largest growers of peppermint in England, and having a thorough knowledge of the whole of the Mitcham district, where it is grown, also watching the progress made daily in cutting and harvesting the crop. Your correspondent's report says that everything now depends upon the weather to ensure a favourable crop. This is a great mistake, as the question of a good crop for this season was decided more than a week before the report was published, as the disease technically known as the "snuff" or "rust" struck practically the whole crop about the middle of August. It is well known to the trade generally that when this disease takes the crop all hope of fine weather improving the yield is at an end, consequently the principal growers had cut more than half of their crop before the report was published, and by the present date most of the large growers have practically finished cutting. Quite three-fourths of the peppermint-crop throughout the whole of the Mitcham district is now cut, so it is impossible for fine weather to cause even a fair yield this season. We all, unfortunately, know how disastrously wet and cold the weather has been during the past month, the most critical period for the peppermint-crop. It has rained twenty-two days out of thirty-one in this district, and the rainfalls have been excessive—June over 7 inches, July nearly 5 inches, and August nearly 4½ inches; total, 16.31—much more than double the average (6.82). The distillation of the crop is now in full swing, and the yield of oil is the smallest we have known for over twenty years. The acreage also is small, as mentioned by us in your issue of July 4, so the total yield of oil for this season will be only about half an average one, or it may be considerably less should the weather continue bad during the harvesting of the herb, as there is always a loss of oil from the herb while being harvested and distilled if the weather proves wet during that

period. The crop of 1902 was a short one, and 1903 is the worst we remember, so the outlook is bad both for the producers and consumers of this article.

The remarks in the report respecting lavender and chamomile we believe indicate the position correctly.

Yours truly,

Mitcham, August 31.

J. & G. MILLER.

#### Citral-content of Lemon Oil.

SIR,—I am glad to note that no English analyst is willing, or able, to attempt a justification of the absurd and impossible citral-value for lemon oil which is insisted on by Messina analysts. I regret troubling you further on the question, but the paper by Gulli and Staverhagen in your last issue renders it necessary for me to do so. The concluding words in their communication explain the whole situation: "It is only according to such a percentage that commercial bargains are concluded here, and if it is less than 65 lemon oil is refused, for it is suspected to be adulterated." This is true within limits, and because years ago it was believed that such a percentage did actually occur, there are some analysts who dare not break away from the tradition and certify a lower amount, for the ignorant buyer, and the seller, who is usually far less ignorant, must have a 7-per-cent. figure to conclude a "commercial bargain." Now it is on the basis of this commercial element that certain people will be eventually brought to see reason; let but one maker of terpeness oil take the trouble to repudiate a contract with 7 per cent. guaranteed, and bring his claim into the law-courts, and the practice will be dropped at once. For a 7-per-cent. oil means a yield of at least 10 per cent. of terpeness oil, and as not more than 5 per cent. can be obtained it will not be difficult to prove the special damage that the breach of contract has done him. But of the chemical points raised, in spite of the volume of work done by Burgess and Child, and checked by Chapman and by myself, as well as others, all of whom find ourselves in agreement with Burgess, no word of criticism is forthcoming on this well-tried and well-authenticated work. The Messina chemists merely content themselves with quoting a process which was reproduced in a pamphlet by Soldaini and Berté as being the method used for the determination of cinnamic aldehyde in cassia oil, and therefore regarded as applicable to lemon oil, but which has already been emphatically condemned by many chemists, amongst whom are Schimmel & Co. The suggestion that we are examining adulterated oils here is so puerile as to be ridiculous. We are examining oils sealed and labelled by certain analysts, who guarantee the 7 per cent. on such labels, and we find about 3 per cent. actually present.

Yours truly,

208 High Street, S.E., August 28. ERNEST J. PARRY.

#### Territorial Representation.

The Pharmaceutical Council must feel pretty sore with itself since the publication of the Board's latest concession. Its representatives might have gone to Somerset House and come away with this treaty in their pockets, and thus have secured all the credit of it. They chose, however, to follow their usual policy of masterly inactivity, and it only happens that nothing is lost by it this time.

SIR,—I take the above paragraph from "Xrayser's" latest "Reflections." Is this, then, one of his obvious reasons for the dismissal of territorial representation? Really, with all deference to "Xrayser," he seems to be getting somewhat mixed on this question. First of all he tenderly indicates that if it can be conclusively shown that the interests of chemists in different districts are "distinct and distinguishable," the scheme is justifiable. In your latest issue he comes out in his true colours, and, whilst admitting in wholesale fashion that the interests of districts might be so "distinct and distinguishable" as to necessitate the election of imbeciles or traitors, bans the scheme for ever. Distinct as matters would probably prove to be, I am unwilling to believe that in any district they would turn out so desperate as this. I have more faith in the wisdom of my brethren under a changed method of election, and whilst recognising that individual chemists could not exercise much power outside their particular constituencies, collectively, I believe, by means of central election committees, which would no doubt be established, and so long as the columns



of the *C. & D.* are open for electioneering manifestoes, a vast amount might be done. But supposing, for the sake of argument, that a district is "cabined and confined," for my part—and I trust there are thousands of the same way of thinking—I would rather be a party to the election of one able and energetic man once in three years than to sending frequently a batch of whom I know little to "pursue their usual policy of masterly inactivity," and form a source of regular supply for the exercise of the nimble wit or severe sarcasm of "Xrayser." I anticipate that before this scheme is allowed to be quietly shelved, "Xrayser" and those who think with him will have to produce more and stronger reasons to face the facts of the situation than have yet appeared.

Faithfully yours,  
Kenmay, September 1.

A. S. WEIR.

#### Assistants and Shop-hours.

SIR,—The recent satisfactory report of the London County Council's work in connection with the Shop-hours and Shop-seats Acts, promoted by this Association, shows that shop-assistants have already gained something by legislation. While waiting for further aid in this direction, the policy of my Board is to "peg away" day by day for voluntary improvements. This "spade" work during the past few weeks has been so far successful that we are receiving assurances daily that an 8 to 8.30 closing will, from this week, take the place of the late hours which have prevailed during the past few months. The extent of these improvements, however, must largely be a question of ways and means. Assistants, who are the real sufferers, have two courses open to them: (1) They can continue the short-sighted policy of forgetting benefits received, and withholding their financial support because the Association cannot work miracles and get early closing by the wave of a magic wand; or (2) they can, by supporting an earnest and self-denying Board with an experienced staff to interview employers, organise meetings, &c., secure still further concession. Those willing to adopt the latter sensible course should at once communicate with us.

Yours obediently,

ALBERT LARKING,

Early Closing Association, Assistant Secretary.  
21 New Bridge Street, E.C., September 1.

#### An Appeal to the Profession.

SIR,—Will employers be good enough when writing testimonials to adhere to the strict truth? Some time ago I engaged an L.P.S.I. to manage a branch, and his testimonials were exceptional, but before he was in my employment a week I had to dismiss him for being drunk behind the counter. I saw in the *C. & D.* recently that a meeting was convened in the Gresham Hotel, Dublin, for the purpose of forming an Assistants' and Apprentices' Association. Would a temperance association not be more required? From my experience I certainly think it would, and if some gentleman would initiate the project he would be conferring on the profession a great and much-needed reformation.

Another very glaring imposition is being practised by unqualified assistants posing as licentiates. Reading the account of the meeting held in the Gresham Hotel, I noticed that amongst the speakers were Haddock, L.P.S.I., McCarthy, M.P.S.I., and, being doubtful that the former held the licence, I communicated with the Registrar, and received a reply saying that no such person was registered nor were any of the others entitled to use the term "M.P.S.I." I should like to have some other employers' experiences.

Yours truly,

A VICTIMISED M.P.S.I. (135/52.)

#### An Atmospheric Phenomenon.

SIR,—The air of Deal appears to be strongly impregnated with saline principles, which are not only felt in their influence on animal and vegetable life, but may be smelt and tasted by human beings. This peculiarity is ascribed to ozone, which is supposed to be a form of oxygen manifested by electricity. The celebrated electrician, Mr. Wm. Hy. Weekes, of Sandwich, demonstrated this fact in my presence more than sixty years since. Saline impregnation of the air is manifested in all old walls, the mortar of which is attacked and decomposed to the extent of from 2 to 4 inches,

threatening the reduction of structure. Some old walls have been patched up with cement, thus retarding their fall, but modern builders, profiting by experience, now employ a compo. of Portland cement in place of lime—advantageous in many particulars. The visible presence of saline particles in the air is seen in a prismatic halo, which encircles the street-lamps, house-lamps, candle-light, and even that of a lucifer match; all are surrounded by a nimbus of greater or lesser circumference and brilliancy (it is always vertical, except when a lighted candle is placed on the floor it become horizontal); but the phenomenon is not confined to the shades of night, for a ray of sunlight admitted to a darkened room displays a very beautiful example of the fact, reminding one of Sir Isaac Newton's capital experiment with the prism. The foregoing tentative remarks are offered simply in the hope that by means of accurate observations some of our meteorologists may be induced to investigate the subject, which to an ordinary pharmacist in extreme old age seems not unimportant.

Yours very faithfully,

Deal.

R. GOODWIN MUMBRAY.

#### Trade-names.

SIR,—The letter you publish in the *C. & D.*, August 8, relating to a drug masquerading under a fancy title is extremely interesting, especially in view of the fact that the very same drug, phenolphthalein, is being advertised to the medical profession as "Laxoin (dihydroxyphthalophenon) gr. ij," and is accompanied by flattering statements which would tend to create the impression that the drug is only made by the firm who make "palatinoids."

Yours faithfully,

ASSISTANT. (116/32.)

#### The Major.

SIR,—Will you allow me to take up one theme of Mr. E. C. Bennison's epistle (*C. & D.*, August 15, page 342)—viz., "Suppose a man does specialise in chemistry and physics, what use are they going to be to him?" Is the future Major man going to pose as a professor of chemistry, physics, or botany? This gentleman evidently does not believe in education and the advantages to be derived therefrom, but he can know that there is one way by which he may be useful to his craft, and that is the elimination from the Board of Examiners of all professors who have little sympathy with pharmacy, and know less of the requirements of the pharmacist. It is quite time the old cry of pharmacy for the pharmacist was raised and brought to a successful issue, for in my humble judgment it is a standing disgrace to our calling that we cannot produce men sufficiently competent to examine our aspirants to pharmacy in the subjects of chemistry, physics, and botany, but have to go outside and do as is becoming fashionable in all things—political, social, and economical—to "put it out," as though it was as distasteful to the powers as the washing of clothes is to the modern monkey-brand woman.

Yours faithfully,

ABEL SCHOLAR. (17/7.)

#### Minor Experiences.

SIR,—We are hearing much nowadays about the "carelessness of the Minor candidate" and his "general lack of education," but I would like to ask if a higher education and a certificate of efficiency for members of the Examining Board are not more necessary. The following fact will probably explain itself. A candidate at the recent Minor examination was actually sent out of the room "plucked" (in his oral work), but on reaching his home was astonished to find that a messenger had been sent, with apologies, to state that "owing to a confusion of names" a mistake had been made, and that particular gentleman was actually "qualified." This is not an isolated case, and yet when astonishment is expressed at a 29 per cent. pass list, we are told that it is all due to "lack of education on the part of the candidate." I think this alone, without mentioning the hundred-and-one other complaints, is sufficient to disgust the higher class of young men whom some of our worthy Councillors seem so anxious to draw into the fold.

Yours, &c.,

A DISGUSTED M.P.S. (106/30.)



### Legal Queries.

Consult "The Chemists' and Druggists' Diary," 1903, before formulating Queries.

129/4. *K. & Co.*—"Celebrated cosmetique" would not render your "milk of cucumber" liable to duty, as the preparation is not held out as a remedy for any disease.

132/17. *J. N.*—(1) If the possessive case is used in the title of the lung-tonic, the medicine will be liable to stamp-duty. (2) The chemist himself must show that his medicine really is made up according to what is stated on the label.

135/6. *Analyst.*—Your qualifications to act as an analyst under the Fertilisers and Feeding-stuffs Act are somewhat hazy. F.C.S. and M.S.C.I. are not qualifications, and unless you are able to produce evidence of your training and ability as an analytical chemist, the Board of Agriculture may not confirm your appointment. The Board judge each case on its merits.

134/57. *Eboracum.*—(1) The bronchial-troches label will make the article liable unless you say on it "Throat Hosp. Pharmacopœia." (2) The fact that you have hitherto sold the taraxacum-and-podophyllin mixture as a stamped medicine, precludes the future sale of it unstamped so far as you are concerned. This is the strict law of the matter, but if you alter the label as you suggest, the Board of Inland Revenue will probably not interfere. The rest of the labels (8 to 30), as they stand or as you propose to alter them, are not liable.

135/31. *P. S.*—We thank you for the formula, but as it is for a preparation that has long paid duty, it is outside the scope of the collection that we are to print in THE CHEMISTS' AND DRUGGISTS' DIARY, which is exclusively to be devoted to the formulas of preparations which have not been made dutiable by the original vendors.

29/19. *J. C.*—Undoubtedly the penny-trade is to be seriously affected by the decision as to ailment-names; but it will not apply to such titles as "Castor-oil Pills," "Penny-royal-and-Steel Pills," and "Compound Rhubarb Pills."

29/3. *R. S.*—See replies to other correspondents on the subject. The Board of Inland Revenue's letter to us in July stated that it would suffice to say that a preparation is prepared according to a formula in THE CHEMISTS' AND DRUGGISTS' DIARY.

128/42 (*F. C.*) and 134/52 (*R. J.*).—It is not absolutely essential that the statement to the effect that a preparation is prepared according to a formula in THE CHEMISTS' AND DRUGGISTS' DIARY should be printed upon the label itself; an additional slip label with such notice will meet the case.

135/50. *Exon.*—On the death of a person in England the first claim upon the estate of the deceased is in respect to funeral and testamentary expenses. Money due to doctors and chemists would rank for payment after the wages of nurses, the last-named being earned in the capacity of a servant, and having priority over certain other debts.

135/46. *Red Tape.*—An unqualified dealer who does not hold a licence to retail stamped medicines may sell phenacetin powder so labelled with directions as to how the medicine is to be taken. Neither the Pharmacy Act nor the Medicine-stamp Acts apply in such circumstances; but if phenacetin or any other entire drug is sold under an ailment-name, or with a recommendation for the prevention or cure of an ailment, the unqualified seller thereof must take out a medicine-vendor's licence.

135/45. *J. S.*—Your pure fluid magnesia label does not render the preparation liable to stamp-duty because the preparation comes within the repeal as to artificial mineral waters, &c., enacted in 1833. The Board of Inland Revenue in 1886 declared that fluid magnesia is exempt from duty. Of the formulas sent by you the following are not liable to duty—eau dentifrice, skin-lotion and scalp and hair lotion—because they are toilet-preparations. The digestive syrup is also not liable as it does not bear an ailment name or a recommendation.

135/17. *Assistant.*—You are entitled to payment for each day or part of a day that you serve in the shop.

240/3. *Hypo.*—Rangoon oil is a mineral oil, and cycle-oils usually are petroleum products, so that the storage of these will invalidate your fire-insurance policy.

131/7. *Lotio.*—Use of Methylated Spirit.—You will require the authority of the Board of Inland Revenue to make household embrocation, corn-solvent, and lotio evaporans with mineralised methylated spirit. Apply through the local supervisor, submitting copies of the formulas. The same applies to ordinary methylated spirit, but in that case a bond is required if necessary.

136/62. *Martin* has been for six years qualified manager of a co-operative drug-company's branch, and has had ten days' holiday every year (in July or August). In the middle of July he received a month's notice to leave, and left in due course. Can "Martin" now sue for and obtain pay for the ten days' holidays which he has not got this year? [At the time "Martin" received notice he should have claimed the holiday, and probably he would have got it or the equivalent in salary. If he did not he is not likely to recover now.]

135/31. *J. B.*—It is impossible for the Board of Inland Revenue to grant a concession in respect to the repacking of pills taken from a stamped packet. If such pills are repacked in a box they become dutiable within the terms of the Act, a box being an enclosure. The Board have made concessions only in respect to doubtful points, and this is not one of them. An amendment of the law would be necessary to give effect to your suggestion. There is no objection to the sale unstamped of any medicinal preparation under such titles as "The Pills," "The Mixture," &c. We feel that your difficulty will simplify itself in course of time—thus for 1-dr. pillbox-labels such disclosure as "Kidney-pills, C. & D.," "Antibilious Pills, Ph.F.," will be as intelligible as "Gregory's Powder, B.P." We understand that label-printers are to supply additional slip-labels bearing the words "Prepared according to 'Pharmaceutical Formulas'" and "Prepared according to a formula in THE CHEMISTS' AND DRUGGISTS' DIARY."

137/32. *Still Doubtful.*—(1) The mere alteration of the flavour of a known, admitted, and approved remedy sold by a qualified chemist with a label referring to a published formula does not make the article dutiable. We deduce this from the terms of the Board of Inland Revenue's letter of August 14 (*C. & D.*, August 22, page 362). (2) Headache-powders prepared according to a published formula may be put up as cachets or tablets by qualified chemists without being dutiable. (3) We do not think that a quinine-and-strychnine mixture may be legally described as "prepared from Peruvian bark and nux vomica," neither of which is actually an ingredient of the medicine. Please note in this connection that strychnine is in Part 1 of the Poisons Schedule, and nux vomica in Part 2. (4) Dummies of Medicines placed in the window do not require to be stamped. It is illegal to print or use stamps which are colourable imitations of the Inland Revenue stamp. (5) The following titles would be considered by the Board of Inland Revenue to be dutiable on and after December 31: "Stomachic mixture," "Nerve-tonic," "Bronchial mixture," and "Pectoral balsam." The following are not, and will not be liable: "Soothing linctus," "Face-lotion" (used solely for toilet-purposes and not for ailments), "The tonic No. 97" (or similar titles), "The paint: to be applied to the bunion," and "The solution to paint on the gums." The last two are open to question, but conform with official decisions.

### Miscellaneous Inquiries.

We endeavour to reply promptly and practically to trade questions of general interest, but cannot guarantee insertion of replies on a particular date, nor can we repeat information given during the past twelve months.

32/36. *J. A. O.*—The rule in dispensing is to use the old ext. belladonnæ (which the B.P. 1898 renamed ext. bellad. viride), unless ext. belladonnæ alcoholicum is distinctly ordered.



119/6. *J. M.*—Your name will be placed on the Register of Chemists and Druggists if you can obtain sworn statements that you were in business on your own account as a chemist and druggist at the passing of the Pharmacy Act in 1868. The Registrar, 17 Bloomsbury Square, W.C., will tell you the particulars and the fee he requires.

120/9. *Tus.*—Incense:

Gum. benzoin.	...	...	...	lb. j.
Gum. thus	...	...	...	lb. j.
Cort. cascarillæ	...	...	...	lb. ss.
Gum. olibani	...	...	...	lb. j.

Reduce the gums and cascarilla to coarse powder and mix together.

This is the formula for incense as used in a London church, but it should be noted that the presence of cascarilla would be objected to in some quarters.

113/29. *J. G. S.*—The best book on fixed oils is Lewkowitsch's, published by Macmillan at 21s.

131/23. *Emigrant.*—(1) We have no reason to doubt "H.'s" remarks in the *C. & D.*, August 22, page 370, that the Minor is not now accepted in Canada. (2) You cannot be wrong in getting the *American Druggist*, 62-68 West Broadway, New York.

104/45. *Dibius.*—(1) Gripe-cordial for children:

Potass. bicarb.	...	...	...	3j.
Syrupi	...	...	...	3j.
Glycerini	...	...	...	3j.
Tr. anthemidis	...	...	...	3ij.
Aq. carui	...	...	...	3ij.
Aq. anethi ad	...	...	...	3viiij.

M.

(2) You could probably claim for the board and lodging of the would-be apprentice, but his counter-claim for services would more than balance yours.

91/73. *W. J. P.*—The Imperial Drink used at the South-Western Fever Hospital is made as follows:

Dissolve pulv. acid. tart. 5ss. in aqua 3j. Make up to a pint with boiling water, and flavour with sugar and lemon-peel.

24/7. *Dogs.*—Worms in Dogs.—The following pills combine the anthelmintics which are used for dogs:

Santonin	...	...	...	gr. ij.
Powdered glass	...	...	...	gr. v.
Powdered areca	...	...	...	gr. x.
Oil of male fern	...	...	...	q.s. ut fiat
Make into a pill.				massa

It is best to give two doses with an interval of a week between.

21/25. *Parisiana.*—We are not acquainted with the method of preparing gelatinous hydrate of magnesia.

131/70. *Westmoreland.*—Soldering Aluminium.—The difficulty in regard to this has been to find a suitable flux, but a practical man informs us that nothing beats lard oil for the purpose. Aluminium solder, an alloy of aluminium with other metals, is also required.

32/38. *R. J. B.*—We know of no book on feeding-stuffs and condiments for horses.

108/22. *Alpha.*—The mixture is compatible, but will not keep good for more than a day or so, as it contains no preservative.

120/42. *Progress.*—(1) Technical Chemist.—We gave in the Educational Number (August 15, page 334) an outline of the steps necessary to take to become an analytical chemist. (2) We have had your suggestion before us for some time.

100/33. *W. J. H.*—Obesity-treatment.—The most-used drugs for this purpose are potassium iodide and thyroid gland tablets. In this connection you should note that Dr. Yorke-Davis (*C. & D.*, July 25, page 182) says that the only safe method of reducing obesity is by means of diet.

120/43. *Seaweed.*—Dyeing Seaweed.—Malachite green gives good results, but we cannot say, as you wish us to, that it is absolutely the best to use.

105/55. *A. M.*—(1) Cough-mixture.—Is not this the same mixture you sent before? We replied on June 27, page 1029, and cannot do any more in the matter. (2) Liquid Metal-polish.—This is frequently sent us for examination by subscribers. We last published the composition in the *C. & D.*, December 6, 1902, page 958.

111/19. *Healache.*—Cremor Bismuthi et Cerii:

Hydrated oxide of bismuth	...	...	...	3j.
Oxalate of cerium	...	...	...	gr. xxiv.
Water	...	...	...	3iv.

Rub smooth.

Dose: 3j. in water.

For the best way of making the hydrated oxide of bismuth (which should be fresh), see "Pharmaceutical Formulas," page 463.

110/32. *J. B. S.*—Liquid Boot-gloss.—The recipe in "Pharmaceutical Formulas" may not yield such a perfect result as some of the commercial articles, but it forms a basis for experiments. You will remember that the formulæ of such preparations are kept secret, and are, moreover, only arrived at after years of experimenting.

114/32. *H. H.*—The addition of a little baking-soda to the boiling water is the secret of the nice colour given to boiled green peas. Some cooks also use an old copper penny to supply a modicum of copper, which has also an influence on the colour of the peas.

133/29. *J. B. B.*—Dry Murrain-drench for cattle:

Magnes. sulph.	...	...	...	1 lb.
Sulph. sublim.	...	...	...	2 oz.
Pulv. zingib.	...	...	...	1 oz.

To be mixed in a quart of boiling thin gruel or ale and given whilst still hot. After eight hours, if the bowels are not opened, give the contents of half a packet every four hours.

115/40. *W. B.*—We have not published a form for apprentice indentures. You are thinking of an assistant's agreement we printed last year.

72/33. *R. M.*—Weed-killer.—Try a few experiments with the arsenical weed-killer. A few tests with a test-tube will soon show you if a stronger solution can be prepared. The ingredients—arsenic and caustic soda—are correct, but you should colour it with a blue aniline dye.

74/9. *Hypo.*—Boot-polishes.—There is plenty of scope for specialising in recipes for boot-polishes. We have found hard carnauba wax give the highest polish. The dyes used do in some cases affect the consistence of the finished polish.

123/61. *Rad. Rhei.*—(1) Wormwood Hair-lotion for the nursery:

Artemesia maritima	...	...	...	3ij.
Cort. quillaie	...	...	...	3ss.
Rosmarini	...	...	...	3j.

Infuse in a pint of boiling water until cold, strain, and add—

Glycerin	...	...	...	3j.
Spt. vini rect.	...	...	...	3j.

(2) Nursery Pomade.—See *C. & D.*, February 7, page 251, for a good recipe. (3) The hair-lotion label does not render the preparation liable to duty (see page 523 of THE CHEMISTS' AND DRUGGISTS' DIARY, 1903). The pomade label comes under the same ruling, as the wording is similar.

127/32. *Diablo.*—(1) We do not know of any Remedy against Loafers excepting through the police for causing an obstruction to traffic, unless you take the law into your own hands (which is not advisable). Your best plan is to lodge a complaint with the local police-inspector. (2) Send us a little of the toothache-tincture, so that we can judge the cause of the separation.



113/63. *H. H.*—What kind of "cement" do you require for packing in tubes?

134/72. *Euclid*.—To Convert Apothecaries' Ounces into Avoirdupois, remember that the apothecaries' ounce contains  $42\frac{1}{2}$  gr. more than the avoirdupois ounce. Or add to the apothecaries' ounces

$42\frac{1}{2}$  or 85 or 17  
 $437\frac{1}{2}$  875 175 of that number.

Put another way, it is multiply the number of apothecaries' ounces by 480 and divide the product by 437.5, the quotient representing the corresponding avoirdupois weight in ounces. Another way is to multiply by 1.01, which gives a slightly high result.

134/38. *H. B. & Co.*—(1) Meat-and-Malt Wine.—See *C. & D.*, November 29, 1902, page 913, or "Pharmaceutical Formulas," page 249. (2) Tonic Wine:

	A.			
Cort. cinchon...	...	...	...	3iv.
Caryophylli ...	...	...	...	3ij.
Vin rubr. ...	...	...	...	Öij.

Macerate fourteen days.

	B.			
Ext. cinchon liq.	...	...	...	3ss.
Tr. cinnam ...	...	...	...	3j.
Syr. aurantii ...	...	...	...	3iv.
Spt. vini gallici	...	...	...	3vj.
Vin rubr. ...	...	...	...	3xij.

M.

134/29. *D. J. W.*—Heroin Hydrochlor.—See *C. & D.* June 27, page 1021. Terpene Hydrate is given in doses of 2 to 6 gr. in pills or suspended in a mixture. It is given in cases of cough and bronchitis.

134/53. *Pioneer*.—The only thing you can do with the Composition-essence is to let it stand in Winchester for a month and pour off from the sediment.

80/61. *Eddie*.—Tr. Saponis Viride, U.S.P.—In the reply to your inquiry, August 29, page 407, "Alcohol 10 oz. 69 minims" was omitted.

134/62. *S.*—The alkaloids in Fellows's syrup are precipitated on adding Donovan's solution to a mixture containing the syrup.

86 57. *J. H.*—*Luzula campestris* belongs to N.O. *Juncaceae*. The English name is woodrush. It is not poisonous, and is generally found in pastures and dry places.

77/53 *Amidol*.—Simple Tests for Drinking-water.—Note if it has any odour after warming in a flask and well shaking. The water should not decolorise in less than a quarter of an hour when tinted pink with solution of potassium permanganate. It should also not show the presence of much chlorides when tested with silver nitrate and acidulated with nitric acid.

93/18. *A. T. E.*—There is no book on botany quite so comprehensive as you require. Bentley and Trimen's "Medicinal Plants" is fairly comprehensive as regards medicinal plants. It is in four vols., 11l. 11s. Sowerby's "British Wild Flowers," published at 3l. 3s., is good for the flora of this country.

64/14. *H. M. C.* (Curacao).—Botanical Plates.—See reply to 93/18 "A. T. E." There are other large illustrated botanical works, such as Sir W. J. Hooker's "Icones Plantarum," but the price is prohibitive.

121/9. *Gigglesvie*.—We do not know "Sir J. Y. Simpson's chloroform hair-lotion," but the sample you send can be imitated by mixing:

Spt. chloroformi	...	...	...	3ij.
Spt. rosmarini	...	...	...	3j.
Aq. dest.	...	...	...	3ij.

103/58. *S. W. B.*—The Magic Washing-cream is a soap-solution to which liquid ammonia has been added. Dissolve  $\frac{1}{2}$  oz. yellow soap in 2 pints of water, and add 5 oz. of liquid ammonia. Distilled water should be used.

129/2. *T. H.*—We cannot identify the plant you send.

80/31. *A. Y. M.*—Lemon-squash.—The recipe on page 216 "Pharmaceutical Formulas" is the better. If you use citric acid instead of the tartaric acid there ordered, the product cannot in any way be described as artificial.

83/72. *Resorcin*.—Books on Scalp and Hair.—G. T. Jackson, "Practical Treatise on the Diseases of the Hair and Scalp," 9s.; and C. H. Leonard, "The Hair: its Growth, Care, Diseases, and Treatment," 7s. 6d. Diseases of Children.—J. F. Goodhart, "Student's Guide to the Diseases of Children," 10s. 6d. (Churchill); L. Freyberger's "Diseases of Children," 7s. 6d. (Rebman). Dental Books.—Small & Colyer's "Diseases and Injuries of the Teeth," 15s. (Longmans).

136/45. *Blacking*.—Cheap Liquid Shoe-gloss.—We suggest that you use as a basis for this an aqueous solution of shellac in borax. Make the experimental batch from shellac 2 oz., borax  $1\frac{1}{2}$  oz., and water 1 pint. Boil till solution takes place and, having filtered the liquid, colour with nigrosin or similar aniline dye.

93/12. *N<sub>2</sub>O*.—(1) Oxygen is made on the large scale by the Brin expired patent, 1416 of 1880, which consists in the alternate formation and decomposition of barium peroxide. (2) Nitrous Oxide is commercially made by the distillation of ammonium nitrate. The nitrate of ammonia, which must be free from chloride, is dried thoroughly below 200° C. and placed in a retort and gradually heated until ebullition occurs. The heat is then carefully moderated, as the salt is liable to too rapid decomposition, and to contain, in consequence, nitrogen and nitric oxide. (3) We know of no book devoted to the production on a commercial scale of these gases.

106/37. *Omega*.—If you acidify the whisky with hydrochloric acid, you will have no difficulty in getting the iron reaction. A trace of iron is sufficient to give a dark colour to cask-stored whisky.

126/55. *F. H.*—The powder you send separated from liquid metal-polish is kieselguhr.

122/46. *Chemicals*.—Your sample of liquid metal-polish is the usual thing—kieselguhr and benzene.

119/72. *W. F. S.*—Smoke-powder for flavouring sausages. This is made by rubbing down a trace of tar with rice-powder. Prepare a stock powder and dilute a portion of it until you match the sample.

133/51. *Pharmac*.—You must supply us with some particulars of the marking-ink so that we can judge whether it is worth examining.

130/7. *E. R.*—You give us no particulars about the paste, and, moreover, we suspect it to be a proprietary article, in which case we must decline to analyse it.

124/49. *J. L. G.*—There is nothing wrong with your sodium sulphite. You should learn to value at its proper worth the suggestion of a professional photographer, that your sodium sulphite caused "flat negatives of thin quality."

121/60. *Souppcon*.—Poultry-spice.—This contains pepper, anise, nitre, salt, and liquorice.

69/16. *G. A. M.*—(1) Electro-therapeutics.—There are chapters on electro-physics, electro-therapeutics, x rays, Finzen rays, light-baths, and vibratory massage in Dowse's "Lectures on Massage and Electricity," 7s. 6d. (Wright). (2) Milk-analysis.—Wanklyn's "Milk-analysis," 5s. (Fribner), is a good book on the subject. (3) The only method of preparing ozone on a large scale is by the silent discharge of electricity through air or oxygen. Permanganate of potash and strong sulphuric acid are sometimes mixed in a sick-room, but in that case oxygen is given off. (4) Diaphragm-sizes.—You had better calculate what these are, as it is not possible to say from the numbers stamped on the diaphragms. The method is to divide the focal length of the lens by the diameter of the diaphragm; for example, focal length of lens  $8\frac{1}{2}$  inches, diameter of diaphragm  $\frac{3}{4}$  inch;  $8\frac{1}{2} \div \frac{3}{4} = 11\frac{1}{3}$ ; number of diaphragm f/11 3.



110/37. *Celt.*—The Nit-pomade you send is a veratrine one, prepared from such a formula as is given in "Pharmaceutical Formulas," page 67, but with vaseline as the basis in place of wax, lard, and olive oil.

96/14. *Midland.*—(1) We cannot undertake to analyse the indigestion-mixture, as it is not of general interest. (2) Laundry-gum.—Powdered borax, containing an eighth of its weight of powdered tragacanth, is used for adding to starch to increase the stiffness.

121/43. *A. W. & Co.*—Non-poisonous Nit-pomade.—Try the effect of adding naphthaline 3j. to 3j. to the pomade you are using at present.

92/12. *Frigid.*—To keep an ice-storing chamber cool the walls are packed with slag or asbestos, so that the walls shall be as little heat-conducting as possible. We do not know "Winchester's patent."

119/60. *H. A. K.*—Laundry-glaze.—This appears to us to be simply curd soap, softened by the water. Soap is, as you are probably aware, largely used as a linen-glaze, and, in a soft condition, is probably easier to use. We do not find any borax present.

121/73. *C.*—The freezing-point of sulphuric acid, sp. gr. 1.207 (28 per cent.  $H_2SO_4$  by weight), is  $-40^{\circ}C$ . With acid, sp. gr. 1.196 (26.63 per cent.  $H_2SO_4$ ), the freezing-point is  $-34^{\circ}C$ . These figures were found by Dr. Thilo, who conducted his researches in Professor Raoul Pictet's laboratory.

### Information Wanted.

136/44. Who makes elixir digestiv-enzyme?

138/13. Who are the makers or importers of the "Finsbury" enema.

137/74. Coloured-plaster models: a good house who supplies these wanted.

135/74. Who is the maker of the "Cradle" earthenware bed-pan and the "Empress" toilet-tidy?

137/28. Formula for the *Sun* cholera-mixture, a preparation sold extensively by New York druggists.

**TINCTURE OF IODINE.**—At Sheerness on Thursday, September 3, the Timothy White Company were summoned for selling tincture of iodine at their Sheerness branch shop deficient of free iodine equal to 21 per cent. Mr. A. B. Shaw, of London, appeared on behalf of the defendants, who pleaded not guilty. Superintendent Rhodes deposed that when he asked for 6 oz. of tincture of iodine, he was told they had only 4 oz. in the shop, but the manager afterwards said he would make up the quantity required. He did so, and charged 2s. 3d. for the tincture. David Jenkin Thomas, the manager, said all the firm's drugs were supplied pure from the depot at Portsmouth. He made up the difference between 4 oz. and 6 oz. from some stronger solution in stock and added three parts of spirit of wine. He could only account for the mistake from the fact that the shadow of the window-blind hid the figure on the graduated measure. Stipendiary Tassell, looking upon it as a technical offence, fined defendants 5s. and 16s. costs.

The *Dundee Evening Telegraph* has, in consequence of revelations at Aberdeen, been inquiring into the prevalence of methylated-spirit drinking, and devotes two columns of a recent issue to the subject. Dr. Mathew Hay, medical officer of health for Aberdeen, has reported on the subject to the Council, and recommends that if satisfied that this dangerous traffic in pennyworths and upwards exists, a representation should be made to the Government. The Chief Constable of Aberdeen, interviewed on the matter, recommends that methylated spirit be regarded as a poisonous drug, and scheduled accordingly. The President of the Trades Council said this drinking is very prevalent in Edinburgh, to some extent in Leith, very prevalent and growing in Glasgow, but it is practically unknown in Dundee. He recommends that methylated spirit be not sold in less than reputed pints, as he considers that if those who drink it had the money necessary to buy that quantity they would rather buy whisky.

## Trade Report.

**NOTICE TO BUYERS.**—The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers stock the goods. Qualities of drugs and oils vary greatly, and higher prices are commanded by selected qualities even in bulk quantities. It would be unreasonable for retail buyers to expect to get small quantities at anything like the prices here quoted.

42 Cannon Street, London, E.C.: September 3.

**B**USINESS remains quiet, although in some quarters a fair amount of trade is being done in several Mincing Lane articles. In crude drugs, attention has been centred on cascara sagrada, the value of which has advanced considerably, principally owing to buying on behalf of defaulting contracts, although apart from this there is a fair consumptive demand. The shellac-market also shows another important advance, especially in "futures," aided by small shipments from Calcutta and good deliveries for the month. Quinine has been steady but very quiet, operators waiting the result of the Amsterdam cinchona-auctions held to-day. Opium maintains its value, especially Persian, of which there are few sellers at present prices. Zanzibar cloves are dearer on the news that the new crop will be short, and there has been a slight advance in clove oil. Star-aniseed oil is firmer for shipment, but the heavy stocks in London tend to keep spot-prices down. American oil of peppermint has a rather firmer tendency, and Mitcham oil, of which there will be a small crop this year, has advanced. Both ergot and lycopodium are firmer, and in one direction offers of the former article from Spain have been withdrawn. German refined camphor has been reduced, but English refiners make no change. First-hand drugs only were offered at auction to-day, and the principal movements of the week are indicated below:

Higher	Firmer	Easier	Lower
Canary-seed (Tky.)	Ergot	Cardamoms	Areca
Cascara sagrada	Fenugreek-seed	Cocoa-butter	Camphor (German)
Cloves	Lycopodium	Sarsaparilla (grey Jam.)	Cinnamon
Copper sulphate	Nutmegs		Lime-juice (W.I.)
Golden seal	Oil, aniseed, star		Menthol
Oil, clove (B.P.)	Oil, peppermint (HGH and Eng.)		
Oil, cod-liver (Newfd.)	Pepper		
Shellac	Senega		
	Wax (Japanese)		

### Arrivals.

The following drugs, chemicals, &c, have arrived at the principal ports of the United Kingdom from August 27 to September 2, inclusive: acid, acetic (@ Rotterdam) 84 bkts., (@ Terneuzen) 142, (@ Fiume) 16; acid, carbolic (@ Rotterdam) 50; acid, citric (@ Bordeaux) 17; acid, oxalic (@ Christiania) 40; acid, tannic (@ Hamburg) 13; acid, tartaric (@ Antwerp) 5, (@ Barcelona) 133, (@ Bordeaux) 4, (@ Rotterdam) 12, (@ Italy) 80; agar agar, 10; albumen (@ Shanghai) 58; aloes (@ Curacao) 35 cs., (@ Mossel Bay) 36; aniseed (@ Hong-Kong) 50 *in tr.*; araroba (@ Bahia), 2 pkgs.; areca (@ Colombo), 133; arrowroot (@ St. Vincent) 150 brls., (@ Natal) 70; balsam copaiba (@ Maranhão), 12; bismuth (@ Sydney), 9; belladonna (@ Hamburg), 15; bleaching-powder (@ Antwerp) 24, (@ Hamburg) 32; camphor (@ Shanghai) 101 pkgs., (@ Hong-Kong) 29 cs. *in tr.*, (@ Kobe) 25 and 300 tubs *in tr.*; cardamoms, 190; caraway-seeds (@ Amsterdam), 120; cascara sagrada (@ New York), 793; ceresin



(@ Buenos Ayres), 246; chamomiles (@ Hamburg) 12, (@ Ghent) 29, (@ Antwerp) 42; chloral hydrate, 1; coca-leaves (@ Ceylon), 6; cochineal (@ Las Palmas), 11; cod-liver oil (@ Rotterdam) 50 cs., (@ Aalesund) 27, (@ Bergen) 5; coriander-seed (@ Hamburg) 645, (@ Calcutta) 30, (@ Königsberg) 100, (@ Malta) 132; cream of tartar (@ Marseilles) 20, (@ Bordeaux) 49; cummin-seed (@ Calcutta) 23, (@ Saffi) 50; dragon's-blood (@ Penang), 6; drugs (@ Marseilles) 26, (@ Trieste) 140; essential oils (@ Ostend), 12; eucalyptus oil (@ Bremen), 51; formaldehyde (@ Rotterdam), 40 cbs.; galangal (@ Shanghai) 165, (@ Hong-Kong) 267 *in tr.*; galls (@ Shanghai) 50, (@ Bremen) 100; gamboge (@ Singapore), 12; gentian, 13; ginger (@ Bombay), 376; gum arabic (@ Bombay) 131 pkgs., (@ Saffi) 35, (@ Suez) 332; gum, unenumerated (@ Bombay), 219; honey (@ Valparaiso), 18 cs.; iodine (@ Valparaiso), 52; lime-juice (@ Dominica), 129 pkgs.; oil, castor (@ Venice), 150 cs.; opium (@ Marseilles) 89 cs., (@ Constantinople) 20; orris (@ Leghorn), 12; poppy-heads (@ Antwerp), 3; pot. carb. (@ Hamburg) 19, (@ Tréport) 7; pot. caustic (@ Tréport), 10; pot. chlorate (@ Gothenburg), 182; pot. cyanide (@ Paris), 111 cs.; pot. oxalate (@ Rotterdam), 10; quillaia (@ Valparaiso), 297 bls.; quinine (@ Amsterdam), 15 cs.; saffron, 1; sal ammoniac (@ Amsterdam), 10; scammony-root (@ Ismid), 53; senna (@ Suez) 65 *in tr.*, (@ Bombay) 278; shellac 557, button lac 300; soda chlorate (@ Tréport), 60; sulphur (@ Catania), 50 tons 850 bgs. 105 cs.; sugar of lead (@ Rotterdam), 13; tamarinds (@ Calcutta), 160; tartar (@ Barcelona) 50 cs., (@ Rotterdam) 11; tartar emetic (@ Hamburg) 30 pkgs., (@ Bordeaux) 25; turmeric (@ Bombay) 501, (@ Calcutta) 449; vanilla (@ Bahia) 1 cs.; wax, bees' (@ Barcelona) 11, (@ Bombay) 5, (@ Hamburg) 20, (@ Morocco) 15, (@ W.C. Africa) 3; wax, vegetable (Jap.) 114, (@ Hamburg) 20; wood oil (@ Shanghai), 270; wood spirit (@ Philadelphia), 112 dms.

## Liverpool Drug-market.

*Liverpool, September 2.*

**SULPHATE OF COPPER.**—Very large sales have been made for forward delivery at from 19*l.* 12*s.* 6*d.* to 20*l.* per ton.

**CASCARA SAGRADA.**—The market is quite bare, and there have been many inquiries.

**BALSAM COPAIBA** (Maranham).—A further arrival of 12 barrels, which will shortly be offered at auction.

**COD-LIVER OIL.**—No further offers have been made of Newfoundland. Some non-freezing and congealable is shortly expected in fulfilment of former contracts.

**CANARY-SEED.**—Considerable sales of Turkish have been made for September shipment at from 37*s.* 6*d.* to 38*s.* 6*d.* per quarter. There are no more sellers at these prices now owing to the disturbed conditions in Turkey.

**HONEY.**—One parcel of fine Californian has changed hands at 45*s.* per cwt. The market is very bare. All grades of Chilian are firmly held at from 18*s.* 6*d.* to 28*s.* per cwt.

**CASTOR OIL** in store is quoted 2*½d.* to 2*¼d.* From the quay good seconds Calcutta is available at 2*½d.* per lb. For forward delivery there are no sellers under 2*½d.* Agents for French are not offering, as seed is said to be dearer and freights are higher.

**LINSEED.**—An arrival of River Plate has been selling freely and good quality is held at 42*s.* 6*d.* per quarter.

**AFRICAN GINGER** is firmly held at 27*s.* 6*d.* per cwt.

**ARROWROOT.**—At auction 100 barrels of prime West Indian were bought in at 3*d.* per lb., but less would be taken to clear.

**KOLA.**—A parcel at auction sold at 3*½d.* per lb.

## German Drug-market.

*Hamburg, September 1.*

Our drug-market shows a fair business this week.

**AGAR-AGAR** is unchanged, current being quoted at 310*m.* to 315*m.* per 100 kilos.

**ANISEED** is tending firmer, and for Russian 36*m.* per 100 kilos. is asked.

**CAMPHOR.**—Refined is lower, the factories having reduced their price to 425*m.* per 100 kilos. and second hands to 420*m.*

**CANTHARIDES** is very firm and dearer, at 620*m.* per 100 kilos.

**CASCARA SAGRADA** is advancing, and 125*m.* per 100 kilos. has been paid for spot delivery.

**ERGOT** is tending firmer, at 240*m.* to 250*m.* per 100 kilos.

**HYDRASTIS** is very firm, at 550*m.* per 100 kilos.

**IPECACUANHA** is quiet, Cartagena is quoted 9*½m.* and Rio 12*m.* per kilo.

**LYCOPODIUM** is very scarce for spot delivery. Spot is quoted 485*m.* and forward delivery 475*m.* per 100 kilos.

**MENTHOL** is firmer; spot is quoted 5*m.* and forward delivery 38*m.* per kilo.

**SENEGA** is firm, at 725*m.* to 735*m.* per 100 kilos.

**SUGAR OF MILK** is firmer, at 105*m.* per 100 kilos.

**OILS (FIXED).**—Castor shows a better demand, first-pressing in barrels is quoted 40*m.* spot, and forward delivery 29*m.* per 100 kilos. Rape is steady at 48*m.* per 100 kilos. Wood is firm at 52*m.* per 100 kilos., and cod-liver is unchanged, at 475*m.* per barrel.

**OILS (ESSENTIAL).**—Star anise is firmer at 10*½m.* per kilo. Peppermint is firm, HGH being quoted 12*m.* per lb.; and Japanese 16*m.* on the spot and 13*½m.* per kilo for forward delivery.

**BLEACHING POWDER.**—English for prompt delivery is quoted 5*l.* 2*s.* 6*d.* per ton on the spot, and in Liverpool 4*l.* to 4*l.* 5*s.* f.o.b. for softwood or hardwood, according to market. The market for 1904 delivery is decidedly firmer.

**CADMIUM SALTS.**—Prices have lately undergone a reduction, makers now quoting 4*s.* 3*d.* per lb. for bromide, 10*s.* 6*d.* for iodide, and 8*s.* 3*d.* for sulphide.

**CALABAR BEANS.**—Small sales have been made in Liverpool at 6*½d.* to 6*¾d.* per lb.

**CASCARA SAGRADA.**—We comment on the position of this article in our editorial notes. Since our last report there has been a strong upward movement, and with a brisk demand, chiefly on account of defaulting contracts, prices have advanced from 65*s.* to 90*s.* per cwt. on the spot, the higher price having been paid several times for last year's bark. On Wednesday 100*s.* was wanted, but this price might be shaded by those who bought earlier in the season at considerably lower prices, and to arrive the price has advanced to 85*s.* c.i.f. terms. The s.s. Minnetonka from New York has arrived with 443 bags and 350 bags of new crop, but it is practically all sold for arrival.

**CINCHONA.**—The N.Y. Nederlandsche Veem at Amsterdam reports the shipments from Java to Europe as follows:

*August.*

Amsterdam		Amsterdam	
Year	Lbs.	Year	Lbs.
1903	1,100,000	1897	697,000
1902	1,857,000	1896	979,000
1901	1,067,000	1895	697,000
1900	977,000	1894	853,000
1899	1,200,000	1893	636,000
1898	1,047,000		

*January–August.*

Amsterdam		Amsterdam	
Year	Lbs.	Year	Lbs.
1903	8,120,000	1897	4,931,000
1902	8,396,000	1896	6,029,000
1901	7,024,000	1895	5,013,700
1900	5,724,000	1894	5,554,000
1899	7,230,800	1893	5,376,000
1898	7,136,000		

**CINNAMON.**—The usual quarterly public sales were held last Monday, and although supplies were small, there was very little demand except for the finer qualities, which sold with good competition at steady prices; ordinary and common descriptions only partly sold at  $\frac{1}{2}$ *d.* to 1*d.* per lb. decline. Superior sold at 1*s.* 4*d.* to 1*s.* 7*d.* per lb. for firsts, at 1*s.* 3*d.* to 1*s.* 6*d.* for seconds, at 1*s.* 1*d.* to 1*s.* 4*d.* for thirds, and at  $\frac{1}{2}$ *d.* to 10*½d.* for fourths. Common to good sold at  $\frac{1}{2}$ *d.* to 1*s.* 1*d.* for firsts, at  $\frac{1}{2}$ *d.* to 10*½d.* for seconds, at  $\frac{1}{2}$ *d.* to 9*d.* for thirds, and at  $\frac{1}{2}$ *d.* to 7*d.* for fourths. Dull to good quillings sold at  $\frac{1}{2}$ *d.* to 8*d.* per lb., and common to good chips at  $\frac{1}{2}$ *d.* to 2*¾d.* per lb.

**COCOA-BUTTER.**—In auction 50 tons Cadbury's sold at 11*¾d.* to 11*½d.* per lb., closing at 11*¾d.*, being  $\frac{5}{16}$ *d.* lower, and 5 cases of 3-oz. tabs. realised 1*s.* 1*½d.* At the Amsterdam auctions 70 tons Van Houten's sold at 60*c.* to 62*½c.* (average price, 60-45*c.*), against 65 56*c.* at the previous auctions; 22 tons de Jong sold at 55*c.* to 55*½c.*

**COPPER SULPHATE.**—There has been a brisk demand for spring delivery, and values have advanced to 18*l.* 5*s.* per ton for ordinary brands, Anchor being quoted 20*l.* to 20*l.* 10*s.*

**GAMBIER.**—Cubes have been sold at from 38*s.* 6*d.* to 39*s.* per cwt.

**GLYCERIN.**—The exports from Barcelona during 1902 amounted to 2,991 tons, against 831 tons in 1901 and 520 tons in 1900.

**GOLDEN SEAL.**—A cable was received this morning from New York, indicating great scarcity, with an advance to 2*s.* 9*d.* per lb., c.i.f.

**MORPHINE** remains steady, makers' quotations being as reported last week.



**OIL, ANISEED, STAR.**—There has been more inquiry, with sales on the spot at 4s. 2d. to 4s. 3d. per lb., and to-day it is difficult to find sellers at the higher figure. For arrival the market is also firmer at 4s. 4½d. to 4s. 6d., c.i.f.

**OIL, BERGAMOT.**—For prompt shipment from Messina 7s. 9d. is quoted, and 6s. 11d., c.i.f., for next year's delivery.

**OIL, CINNAMON.**—Small sales of leaf oil are reported at 1¾d. per oz. for palish.

**OIL, CLOVE.**—The advance in cloves has brought about a 1d. advance, and distillers quote from 2s. 8d. to 2s. 9d. per lb. for B.P. quality, according to quantity.

**OIL, COD-LIVER.**—Our Bergen correspondent writes on August 29 that no interest has been shown in the market this week, and finest non-congealing quality is quoted nominally at 450s. per barrel, f.o.b. Bergen. The exports from Bergen to date amount to 1538 barrels, against 5336 barrels at the corresponding period of last year. There has been rather more inquiry on the London market, and for best brands on the spot 480s. to 490s. is wanted. As regards Newfoundland oil, business has recently been done at the equivalent of 14s. per gal. for non-congealing, and 14s. 6d. is now asked for parcels "to arrive."

**OIL, LEMON.**—A leading brand for prompt shipment from Messina is offered at 2s. 3d. per lb., and for delivery from November over 1904 at 2s. 5d., c.i.f. terms.

**OIL, LEMONGRASS.**—Spot value is 6d. per oz.

**OIL, NEROLI, of Sicilian make,** is offered at 125s. per lb.; Bigarade, from petals, 92s.; "superior" ditto, 67s.; and Portugal, 42s. per lb., c.i.f. terms.

**OIL, OLIVE.**—The following figures represent the exports of olive oil from the undermentioned Spanish ports from 1900 to 1902:

	1900	1901	1902
Barcelona (tons) ...	4,307	3,365	2,350
Alicante (tons) ...	250	200	640
Tarragona (casks) ...	11,403	12,569	27,377
Palma (tons) ...	—	4	24

The great increase in the exports from Tarragona is due to large orders from France, but it appears that the Marseilles market is now overstocked.

**OIL, ORANGE.**—New crop of sweet or bitter is quoted 6s. per lb. for prompt delivery from Messina, and next year's delivery at 5s. 5d., c.i.f.

**OIL, PEPPERMINT.**—A fair amount of business has been done this week, including American HGH at 11s. 3d., and 11s. 6d. is now wanted. Pure so-called Wayne County is quoted 9s. 9d. per lb., c.i.f. For arrival, business has been done in Kobayashi brand at 5s., c.i.f. In one quarter the list-price for English oil has been advanced to 34s. per lb., net. In auction, 10 cases of Japanese dementholised oil (Suzuki brand) were sold, with all faults on account of whom it may concern, at 4s. 4d. per lb.

**OLIBANUM.**—Sales of fair extent have been recently made at 22s. per cwt. for garblings, middling drop at 32s. 6d., fair drop at 35s. to 37s., and good pale drop 45s. to 43s. per cwt.

**OPIMUM.**—There is some inquiry for Persian for shipment to China, but holders have advanced their prices to 11s., which precludes business. Forward delivery is not offering at present. In Turkey no business is reported.

**SMYRNA, August 21.**—We have to report a lower market this week, with sales of about 100 cases for the United States. As soon as weak needy holders have cleared out their available surplus stock we expect a firmer tone will set in, and large interested holders will do all they can to bring about an advance again. Another correspondent writes on August 22 that a large American exporter who showed a desire to treat for a fairly large quantity was able to purchase, after some difficulty, some 105 cases from weak holders at lower prices, the business consisting of old current and Karahissar t.g. at from the equivalent of 9s. 6d. to 9s. 8d. per lb., c.i.f. terms. The arrivals in Smyrna to date amount to 1,004 cases, against 3,091 cases at the corresponding period of last year.

**CONSTANTINOPLE, August 28.**—We have to report a marked decline since our last, brought about by the recent heavy rains all over the interior, which have induced holders to be rather less reserved than hitherto. At the same time we look upon this decline as a passing feature only, and when holders regain their senses, so to speak, an upward reaction appears to us inevitable.

The stock in Smyrna is undoubtedly large, but it must be borne in mind that about 25 per cent. of it consists of very low qualities. The Salonica and Constantinople stocks are rather light than otherwise, and any brisk demand would have an immediate effect on prices. The new crop has yielded barely 3,000 cases all told, and this includes 550 "soft shipping," so the present state of the article is quite unwarranted. The week's sales amount to 30 cases selected "druggists" at 9s. 9d., and 2 cases soft shipping at 11s. per lb., f.o.b. The market closes quiet.

**POTASH CHLORATE** is very quiet and without change, at 2¾d. per lb. net for crystals and 2½d. for powder. In Liverpool 2¾d. to 2½d., f.o.b., is quoted.

**QUICKSILVER.**—The following figures relating to the exports of various countries are taken from official records:

	1900-1	1901-2	1902-3
	Lbs.	Lbs.	Lbs.
U.S.A. (eleven months, ending May) ... ..	686,605	714,523	1,219,569
	1901 Kilos.	1902 Kilos.	1903 Kilos.
Austria-Hungary (five months, ending May) ... ..	229,100	200,100	259,800
Italy (five months, ending May) ... ..	119,600	97,300	92,000
Spain (four months, ending April) ... ..	412,756	771,984	482,123

**QUININE.**—Pending the bark-sale at Amsterdam to-day, and the figures relating to the Java shipments for August, there has been no disposition to operate this week. The quoted spot price in second hands for good German sulphate in bulk is 11¼d. per oz., with sellers of December delivery at 11¾d.

The landings during August amounted to 10,000 oz., and the deliveries 93,944 oz., making the stock on August 31 3,194,018 oz., against 3,560,752 oz. in 1902.

**SEEDLAC.**—Fine pale Karachi has been sold at 135s., and medium to good red at 117s. 6d. to 120s. per cwt.

**SEEDS.**—Russian *Anise* is firm, but there is no business reported. Dutch *Caraway*s are steady at 21s. to 22s. per cwt. *Coriander* is selling at 11s. 6d. per cwt. for Morocco, and at 13s. 6d. for Russian, but only in retail lots. *Cumin* is quoted 20s. to 22s. per cwt. for Morocco, and 24s. to 28s. for ordinary to fine Malta. *Canary* is dearer for shipment from Turkey, and sellers have for the present withdrawn from the market. The spot prices are rather firmer at 47s. per quarter for Turkish, and at 48s. for Morocco. *Linseed* quiet at 37s. 6d. per quarter for bold Morocco. *Peanut* scarce, and tending dearer; sales have been made at 7s. 6d. per cwt. The exports of aniseed from Alicante during 1902 amounted to 200 tons, against 280 tons in 1901 and 450 tons in 1900. From Barcelona 350 tons of aniseed, cumin, and pimento were shipped last year, against 332 tons in 1901 and 465 tons in 1900.

**SENEGA** is firmer on the spot at 3s. 4d. per lb. net, or 3s. 3d. c.i.f. terms.

**SHELLAC.**—The spot price for fair second orange TN has advanced about 5s. on the week, now being quoted at 161s. per cwt., and a fair business has been done. A C Garnet has been sold at 135s., and blocky GAL at 122s. 6d. Fine Buttons have changed hands at 170s., and fair at 160s. The delivery-market has also shown a daily advance, being from 6s. to 8s. dearer on the week, with an active market. September to January delivery has sold up to 162s. to 163s. and for arrival a large business has been done, including TN for October-December shipment, at 155s. to 155s. 6d., c.i.f.

**SPICES.**—At auction no Jamaica *Ginger* was offered. Cochin met with a slow demand, only 20 bags selling out of 597 packages offered, at 32s. for fair washed rough. *Cloves*. Good bright Zanzibar were bought in at 4½d. per lb. Privately there has been a much better demand at dearer rates, spot selling at 4¾d. to 4½d. for fair to fully fair, and for delivery several hundred bales October-December and January-March have been sold at 4½d. to 4¾d. *Pimento* sold at 2½d. for mixed blacks. *Nutmegs* were rather dearer, and West Indian *Mace* was firm: nine cases of pale bright curly Java character



sold at 2s. 6d. *Pepper* was bought in at 6½d. for fine heavy Saigon, and 6¼d. for fair Alleppy. Privately Singapore is held for 6½d. on the spot. *White Pepper* in auction sold at 9¾d. for 114 bags good Singapore, and privately prices are steady with sales of fair at 9½d., and fair Penang at 9¾d. on the spot.

**SULPHUR.**—The market is now better supplied owing to arrivals, and foreign flowers and roll is now obtainable at 6l. 5s., the demand being principally for the latter form.

**VERMILION.**—Small sales of *Wingkat* brand are reported, at 2s. 10d. per lb.

### London Drug-auctions.

At the auctions of first-hand drugs to-day there was little of interest beyond the offerings of cardamoms and senna. Sumatra benzoin was neglected. Buchu sold at steady rates, and for cardamoms, of which there was an unusually heavy offering, prices were rather easier. Dragon's-blood and gamboge did not sell. Rio ipecacuanha was steady at the previous auction-prices, but very little business was done. Rhubarb was quiet, and the sales publicly were confined to small lots of wormy "without reserve." Tinnevely senna sold with active competition at very high prices, and the quality all round again showed some improvement. Jamaica wax was inclined to be firmer, and all other descriptions offered were bought in. The following table shows the amount of goods offered and sold:

	Offered	Sold		Offered	Sold
Albumen .....	31	0	Insect-flowers .....	20	23
Aloes—			Ipecacuanha—		
Cape .....	15	15	Rio (natural) .....	16	7
Socotrine .....	20	0	" ("cult.") .....	16	4
Ambergris .....	2	1	Kola .....	4	4
Annatto-seed .....	29	0	Lime-juice .....	116	109
Areca .....	38	0	Mastic .....	5	0
Balsam—			Menthol .....	2	0
Tolu .....	1	0	Musk—		
Benzoin—			grain (bot) .....	1	0
Palembang .....	30	0	Myrrh .....	15	0
Sumatra .....	77	4	Oil—		
Buchu .....	11	8	eucalyptus .....	20	0
Calumba .....	84	0	peppermint (Jap.) .....	10	10
Camphor (ref. Jap.) .....	10	0	ylang-ylang .....	1	0
Cardamoms .....	807	502	Puree .....	3	0
Cascarilla .....	10	*5	Rhubarb .....	52	7
Cassia fistula .....	2	2	Sarsaparilla—		
Castorum .....	2	0	grey Jamaica .....	11	11
Cinchona .....	108	0	native Jam. ....	19	15
Coca-leaves—			Seedlac .....	81	81
Ceylon .....	4	4	Senna—		
Cocculus indicus .....	30	30	Tinnevely .....	500	500
Croton-seed .....	42	24	Soy .....	32	0
Cumin-seed .....	8	0	Squills .....	7	0
Divi-divi .....	2	0	Tonka-beans .....	3	0
Dogwood-bark .....	1	0	Turmeric .....	101	0
Dragon's-blood .....	13	0	Wax (bees)—		
Elemi .....	20	0	Bengulla .....	4	4
Galangal .....	165	0	East Indian .....	75	0
Gamboge .....	12	0	Jamaica .....	18	8
Gum acacia .....	68	0	Morocco .....	13	0
Gum accroides .....	50	0	Nyassaland .....	1	1
Honey—			Rangoon .....	30	0
Californian .....	25	0	Zanzibar .....	105	0
Jamaica .....	78	14	Wax (Jap. veg.) .....	58	0

\* Sold privately.

**ALBUMEN.**—A parcel of 31 cases Chinese, catalogued for sale "without reserve," were withdrawn, no price being mentioned.

**ALOES.**—A direct arrival of 35 cases from Curaçao has taken place in Liverpool. None of this description was catalogued in auction. Of Cape aloes, 15 cases were offered and sold, 60s. being paid for 3 cases of good bright dark but soft aloes, and from 45s. to 47s. for the remaining 12 cases, which consisted of fair to good bright, but unusually soft and slightly drossy, the lower figure being paid for false packed.

**ARECA.**—A further 138 bags have arrived this week from Colombo. In auction 9s. 6d. was wanted for a parcel of medium to bold sound Ceylon.

**BENZOIN.**—There was only a slight demand for Sumatra, which sold at steady rates, 6l. 10s. per cwt. being paid for a few cases of fair almondy seconds, slightly false packed,

and previous to the auctions this grade had been sold at the same figure. Fair glassy Palembang seconds were sold at 40s. per cwt.

BUCHU sold at steady rates, 9½d. per lb being paid for slightly brownish round leaves and 9d. for a bale of yellowish and stalky.

**CARDAMOMS.**—There was a fair demand in auction, and as importers appeared anxious to do business prices were rather easier, especially for small sizes. There is a feeling, however, that better prices will prevail for cardamoms later on. The following were the prices paid:—Ceylon-Mysore: Extra bold pale picked, 2s. 3d. to 2s. 4d.; bold pale, slightly split, 2s. 2d.; good pale smooth, medium sized, 1s. 11d. to 2s. 1d.; extra bold dullish, 1s. 9d. to 1s. 10d.; bold medium pale, 1s. 4d. to 1s. 6d.; yellowish ditto, 1s. 2d. to 1s. 3d.; small yellowish, 11d.; small to medium pale, 1s. 1d. to 1s. 3d.; bold splits, 1s. 2d.; yellowish splits, 1s. 1d.; small pale, 10d. to 11d.; very small peas, 9½d.; common brown splits and pickings, 8½d. to 9½d. per lb. For ten cases small to medium brown Alleppy a bid of 10d. is to be submitted. Decorticated seeds were steady at 1s. 1d., and for 14 cases good dark Bombay seed 1s. 4d. was asked.

**CASCARILLA.**—Siftings were the only description offered, of which part had been sold privately, and 35s. was asked for the remainder.

**CASSIA FISTULA.**—This scarce article sold with competition at 37s. 6d. per cwt. for fair West Indian pod.

**COCA-LEAVES.**—Four cases of good green Ceylon sold at from 1s. 1d. to 1s. 2d. per lb.

**COCCULUS INDICUS.**—A parcel of 30 bags realised 6s. 6d. per cwt.

**CROTON-SEED.**—Four bags barely fair to dark mixed sold at 22s. 6d. per cwt., and 20 bags ordinary dull dark mixed sold at 19s. 6d., without reserve.

**CUMIN-SEED.**—Fair Maltese of new crop was obtainable at 29s. per cwt.

**DRAGON'S-BLOOD.**—Quite neglected in auction, although privately some business has been done at full prices.

**ELEMI.**—Good pale Manila was taken out at 65s. per cwt.

**GAMBOGE.**—Buyers' ideas are much above the prices holders are willing to sell at, and in auction to-day 15l. was wanted for 2 cases of very blocky pickings, 16l. for very ricey and blocky Siam and Saigon mixed, and 18l. for good bright Siam pipe.

**HONEY.**—A parcel of 25 cases of new crop Californian, said to be the only parcel in London, was taken out at 42s. 6d. Although Jamaica was in reduced supply, the bulk of the offerings were bought in. Fair to rather dark liquid, in casks, sold at from 18s. 6d. to 19s., and for good ditto, in cases, 22s. per cwt. was paid. Good thick white was held at 23s. per cwt.

**INSECT-FLOWERS.**—A parcel of fair small closed flowers sold readily at from 90s. to 92s. per cwt.

**IPECACUANHA.**—On the request of one of the London brokers the Dock Company has decided to revise the classification of the ipecac. stocks, and they will now be returned as Matto Grosso, Minas, Cartagena, and East Indian root. The term "Matto Grosso" applies to the native Rio, and that of "Minas" to the so-called "cultivated" Rio. The stocks on August 31 were as follows: Matto Grosso, 319 packages; Minas, 111; Cartagena, 249; and East Indian, 24 packages; total, 703 packages. The deliveries for the month amount to 107 packages of all kinds, but mostly Matto Grosso and Minas descriptions. In auction 6 bales of native Rio sold without reserve at from 4s. to 4s. 2d. for ordinary lean and stemmy, partly sea and country damaged, being fairly cheap compared with the prices asked for sound—viz., 4s. 9d. to 4s. 10d. for ordinary to fair lean. One bale, however, had been sold privately at 5s. Of cultivated Rio, or "Minas," as one firm of brokers describe it, 16 bales were offered, of which 4 sold at 4s. 7d. for good clear native-picked root. No Cartagena was offered, but privately holders are firm, although buyers and sellers are rather wide apart in their ideas of value.

**KOLA.**—Three bags of dull mouldy to fair Ceylon sold at



from 6*d.* to 6½*d.* per lb. One half-barrel of mouldy West Indian sold at 2½*d.* per lb.

The exports from French Guinea during 1902 amounted in value to 3,422*l.*, of which 1,287*l.* worth was shipped to France and colonies, 77*l.* to United Kingdom and Sierra Leone, and 2,058*l.* to "other countries."

**LIME-JUICE.**—A parcel of 109 hhds. inferior unworked West Indian sold "without reserve" at from 7½*d.* to 9*d.* per gal.

**MENTHOL.**—For 2 cases of Kobayashi brand 20*s.* 3*d.* was asked.

**MYRRH.**—Fair small to bold Aden sorts were limited at 85*s.* per cwt.

**RHUBARB.**—Quiet. For a parcel of 13 cases new crop of small to bold common round rough native High-dried, with two-thirds pale pinky fracture and one-third dark, 6*d.* was wanted, the highest bid obtainable in sale being 5½*d.* Four cases low wormy High-dried of old import sold without reserve at from 6½*d.* to 6¾*d.*, and 2 cases of very wormy Shensi sold without reserve at 6*d.* A parcel of 10 cases small to bold flat High-dried, with three-quarters pinky fracture, was limited at 9*d.* per lb.

**SARSAPARILLA.**—There was only 1 parcel of grey Jamaica put on show in time for the auction, and it sold at from 1*s.* to 1*s.* 1*d.* per lb. (11 bales). Six bales of Lima-Jamaica were limited at 1*s.*, being steady, and of Native-Jamaica 15 bales were disposed of at from 10*d.* to 1*s.* 2*d.* per lb. for sea-damaged.

**SEEDLAC.**—Fourteen bags Madras scabs sold at 110*s.* and blocky at 102*s.* per cwt., and another broker disposed of 67 bags at from 112*s.* 6*d.* to 115*s.* for small dusty, and 105*s.* to 115*s.* for blocky and part blocky, and 65*s.* per cwt. for dust.

**SENNA.**—As usual there was a good demand for Tinnevely leaf, and everything offered was sold at irregular but generally higher rates, say, ¾*d.* to ¾*d.* per lb. The following prices were paid: Tinnevely, extra bold greenish sound, 7*d.*; bold greenish fair to good, 4½*d.* to 5½*d.*; small and medium greenish, 3½*d.* to 4½*d.*; small and medium greenish, part specky and sea-damaged, 2½*d.* to 3*d.*; and common to ordinary specky sea-damaged, 1½*d.* to 2½*d.* per lb. *Pods* sold at from 1½*d.* to 2½*d.* per lb., according to quality.

**SQUILL.**—Seven bags of very damp palish sold without reserve at 2*d.* per lb.

**TONKA-BEANS.**—A cask of good frosted Angostura was taken out without mention of price, and for two cases of fair Para 1*s.* 6*d.* was wanted.

**WAX, BEES.**—Jamaica description was rather firmer, if anything, from 7*l.* 12*s.* 6*d.* to 7*l.* 15*s.* being paid for fair to good. For 21 bales of good brown Zanzibar block a bid of 7*l.* 17*s.* 6*d.* is to be submitted, and it will probably lead to business. Four bales of Benguela were disposed of at 6*l.* 15*s.* per cwt. for fair, part very drossy, and a package of wormy from Nyassaland sold at 90*s.* Good yellow Calcutta was bought in at 6*l.* 12*s.* 6*d.*, and dullish bleached Calcutta at 7*l.* 5*s.*

### Madras Government Cinchona.

The annual report of the Madras Government cinchona-plantations for 1902-3, which has just been issued, shows that the year's harvest amounted to 144,232 lbs. of bark, taken as usual from thinnings and prunings. The factory-results establish a record in several respects—e.g., the quantity of bark worked up (528,000 lbs.) was much greater than in any previous year, the cost of manufacture per lb. of bark—8693 pies—was considerably less than any rate previously reached, and the outturn of quinine amounted to 15,711 lbs. These satisfactory results are due to the improved machinery recently introduced. The total cost per lb. of quinine is calculated to have been Rs.11 1*l.* 3½*p.*, a rate materially lower than those of the two previous years—Rs.14 13*s.* 2*p.*, and Rs.16 7*s.* It is not expected that the cost of manufacture per lb. of bark can be further lessened, and accordingly further reduction in the cost of the quinine must be sought, by dealing with richer bark and in improving the factory processes. The average percentage of quinine extracted from the purchased bark worked up during the year—viz., 2.85 per cent.—is distinctly low. As regards the issue of quinine and febrifuge, it exceeded the previous year by 1,460 lbs., and was the largest on record—viz., 13,179 lbs. The sales under the pice packet system in post-offices also shows a steady increase; the number of packets

of 102 5-gr. powders sold in the year was 15,914 packets more than in the year before. The profit for the year was Rs.68,070, and altogether the Government is satisfied with the energy and efficiency with which Mr. Standen and Mr. Romilly (who acted as *locum tenens* for seven months) have managed the plantations and finances.

### The Russian Tariff and Chemicals.

At the monthly meeting of the Newcastle and Gateshead Chamber of Commerce on August 6 the Secretary stated that he had received a communication from the Board of Trade in regard to the new Russian and Austro-Hungarian tariffs, asking for information in regard to the effect of these tariffs on the trade of Newcastle. The question had been considered by the sub-committee, and it was agreed to send the following details as to the effects of the Russian tariff:

#### Exports from Tyne to Russia.

		1890 (tons)	1902 (tons)
Bleaching-powder	...	8,000	724
Alkali	...	1,800	74
Caustic soda	...	1,450	340

#### Exports from U.K. to Russia, 1890.

	Tons	Value
Bleaching-powder	8,300	£40,000
Alkali	3,400	15,000
Caustic soda	13,500	120,000
	25,200	£175,000

This export-trade is now extinguished by the import-duties levied by the Russian Government, viz.:

	Per ton	Rate
	£ s. d.	per cent.
Bleaching-powder	7 10 0	200
Alkali	5 17 6	130
Caustic soda	9 15 0	120

It seems obvious that these duties are not levied for Revenue purposes, but to prohibit the importation of these goods. The general effect is thus to bring exports to Russia from the United Kingdom to a standstill, as the same result occurs in other trades.

The Newcastle Council suggest the desirability that his Majesty's Government should represent to the Russian Government that the duty applicable to the products entering Russia from Great Britain should not exceed 10 per cent., in view of the fact that Great Britain offers free-import markets to the products of Russia—a market which is anxiously desired by the Russian Government on behalf of its exporters. The Tyne and St. Petersburg are favourably placed by nature for the free exchange of commodities required respectively by both nations.

### Economic Products in Ceylon.

The new edition of the *Ceylon Handbook* (1903-4) states that cardamom-planting between June, 1902, and July, 1903, is represented by an increase of 1,125 acres, the total now being 9,746 acres. It is expected that very little, if any more, will be planted in the face of the risk of over-production, until there is evidence of new markets or an increased demand becoming available. Cinchona is slowly increasing from additional plantings in some of the higher districts, the return standing at 3,469 acres, representing, perhaps, seven millions of growing trees or plants. Of pepper, nutmegs, vanilla, croton, and annatto seed, there is an appreciable aggregate extent cultivated on plantations, while of coca, kola, camphor, and cloves there are also a good many acres.

### Cablegrams.

**HAMBURG.** September 3:—Golden seal has advanced to 600*m.* per 100 kilos. Both Japanese wax and turpentine are advancing, and menthol is firmer.

**NEW YORK.** September 3:—A fair amount of activity is noticeable. Cascara sagrada has been excited, and from 20*c.* to 25*c.* per lb. is quoted. Senega is firmer at 78*c.*; golden seal is also dearer at 60*c.*, and serpentary at 42*c.* per lb. These three articles are very scarce on the New York market. Opium is lower at \$3.25 per lb. in single cases. Peppermint oil is hardening, \$2.10 per lb. being quoted for bulk. Para balsam of copaiba is plentiful, being offered at 37*c.* per lb.

The exports of crude tartar from Bari during 1902 amounted to 1,870 tons, valued at 117,790*l.*, against 1,420 tons, valued at 90,120*l.*, in 1901.



## Reviews.

*Elementary Photo-micrography.* By WALTER BAGSHAW. Illus.  $7 \times 4\frac{3}{4}$ . Pp. 63. 1s. net. London: Iliffe & Sons (Limited).

WRITTEN for beginners who often lack the conveniences of the expert worker, this book fulfils the purpose very well. Mr. Bagshaw thinks this branch of photography is rather neglected, but that is probably due to the fact that all photographers do not possess microscopes nor do all microscopists possess cameras. Photo-micrography is a capital winter pastime, albeit a good deal of patience is demanded of those who practise it. It is easy to follow the instructions here given, and the illustrations set before a student high ideals.

*Practical Photo-micrography.* By ANDREW PRINGLE, F.R.M.S., Illus. Third edit.  $8\frac{1}{2} \times 5\frac{3}{4}$ . Pp. 179. 3s. 6d. net. London: Iliffe & Sons (Limited).

THIS edition has been entirely re-set and here and there alterations, due to the introduction of new pieces of apparatus and new processes, have been made in the text. The chapter on photographic plates has been brought up to date by the particulars given of Cadett & Neall's spectrum plates which give such remarkably good results in photo-micrography. Those who know Mr. Pringle's standing will wonder at him referring to Nikko paper as "lately introduced," but apart from minor faults which do not affect the purpose of the book this edition maintains the reputation of the work as an instructor in this branch of science.

*A Treatise on Materia Medica and Therapeutics.* By R. GHOSH, L.M.S. Cal. Univ.  $7\frac{3}{4} \times 5\frac{1}{4}$ . Pp. 655 + Index. 7s. Calcutta: Hilton & Co., 109 College Street.

THIS is a combination of treatises on pharmacy, dispensing, and materia medica, for the use of students. The endeavour of the author was "to minimise the labour of the student by condensing the subject-matter, and treating the same on simple methods." This he has succeeded in doing, more or less successfully, by borrowing liberally from the standard works of Whittle, Martindale, Lucas, MacEwan, and Hale White. Recognition is likewise paid to "many others, especially to Drs. Laudor Brunton, J. Mitchell Bruce, William Murrell, and Sydney Ringer." Valuable advice and encouragement were given by, amongst others, Professor Thomas R. Fraser, of Edinburgh, and Mr. E. W. Harper, pharmaceutical chemist, who read the proof-sheets of pharmacy and dispensing. Mr. Ghosh was lecturer on materia medica at the Calcutta Medical School, but he died in August of last year, and the work under consideration was completed by Dr. C. P. Lukis, professor of therapeutics at the same College.

*Chemistry, Inorganic and Organic, with Experiments.* By CHARLES LOUDON BLOXAM. Ninth edition. Re-written and revised by JOHN MILLAR THOMSON and ARTHUR G. BLOXAM.  $9 \times 5\frac{1}{2}$ . Pp. xi-872. 18s. net. J. & A. Churchill.

BLOXAM'S "Chemistry" was first published in 1867, and was even then a bulky volume. Professor Millar Thomson and Mr. A. G. Bloxam took up revision at the eighth edition, in 1895, taking care to retain the features of the original work. Under this joint editorship the work has in this, the ninth, edition extended to close upon 900 pages. It is increasingly difficult, when one considers the rapid strides which have been made in chemical science, to keep down the size of a work which covers the whole ground—inorganic and organic—but it is to the credit of the editors that they have succeeded in a difficult task without unduly cramping the parts of the subject. Organic chemistry, it is true, occupies the smaller half of the work, but by the omission of an undue proportion of structural formulæ and the liberal use of small type the object of the original author—to survey the whole field of chemistry—has been preserved. What we like about the book is its practical ring. The subject is not treated in a dry-as-dust manner, but experiments are described and illustrated which impress upon the student the reality of chemical force. Care seems to have been taken to bring the book up to date. The chapter on liquid air accu-

rately epitomises the present knowledge of this interesting reagent, whilst helium, krypton, xenon, and neon come in for fair treatment in the argon paragraph. Even radium, which it would have been excusable if it had not been mentioned—so recent is the appearance of this element on the chemical horizon—comes in for a note in the consideration of uranium and radio-active substances. There is a chapter on applied chemistry which gives outlines of the processes involved in gas-making, dyeing, and calico-printing, tanning, candle-making, soap-making, brewing, &c. This is a feature generally only to be found in special volumes, and is decidedly useful in a reference-book of this kind.

*The Chemical Changes and Products Resulting from Fermentations.* By R. H. ADERS PLIMMER D.Sc.  $8\frac{3}{4} \times 5\frac{1}{2}$ . Pp. 184. 6s. net. London: Longmans, Green & Co.

A SCHOLARLY essay on the chemical changes brought about by fermentation of carbohydrates, esters, urea, and uric acid, the changes in blood, milk, albumins, and by putrefaction. The special value of the book is the orderly and concise manner in which the facts deduced by various chemists in investigations of this difficult subject are marshalled. The principal deductions are that the active agent is in all a living organism which sets up changes in substances of different constitution, such as carbohydrates and albumins. The changes are principally hydrolytic, but some are oxidative and reductive. These are generally simplifications of the original body, but in a few cases synthesis occurs. There is an excellent bibliography at the end of the book.

*Aids to Infant-feeding.* By JOHN MCCAW, M.D. Foolscape 8vo. Pp. 114 + Index. 2s. 6d. London: Baillière, Tindall & Cox.

A USEFUL little handbook on the feeding and hygiene of infants and young children. The book is primarily intended for the use of senior students and busy general practitioners whose time for reading and sifting elaborate treatises is limited. The busy pharmacist will also find in it many useful hints on the composition of artificial foods for children. A special section deals with the proprietary foods already on the market, but this is only a slight elaboration of the subject as exhaustively dealt with in the address by Dr. Hutchinson, recently given before the South-West London Medical Society. In this connection it is interesting to note that Dr. McCaw has found a variety of feeding to be advantageous in some stubborn cases. He records the case of an infant for whom two doctors and several nurses had failed to provide a food that was acceptable. The experimenters had confined themselves to modifying Horlick's milk in varying proportions, but on Dr. McCaw's suggestion a variety was tried. Mellin's food, a whey-and-cream mixture, and cow's milk properly diluted were given at different times, and the result was complete success.

*Animal and Vegetable Fixed Oils, Fats, Butters, and Waxes: their Preparation and Properties, and the Manufacture therefrom of Candles, Soaps, and other Products.* By C. R. ALDER WRIGHT. 2nd edition by C. AINSWORTH MITCHELL. 2 plates and 154 illustrations.  $9 \times 6\frac{1}{2}$ . Pp. xvi-804. 25s. net. Charles Griffin & Co. (Limited).

SOME ten years ago when Dr. Alder Wright set about writing his book on fats and oils he only intended to give the analytical side of the subject general consideration. In this edition Mr. Mitchell has particularised analytical methods and made the book a complete work on fats and oils, but with the inevitable result of increasing the bulk of the volume to half as much again. To give an idea of the scope of the work we mention the headings of the sections: (1) General composition and nature of oils, butters, fats, waxes, and allied substances; (2) physical properties; (3) chemical properties; (4) processes used for extracting, rendering, refining, and bleaching oils, fats, &c.; (5) classification, uses, and adulterations; (6) the candle industry; (7) the soap industry. When one comes to study any particular subject it is found that the information covers a wide field, and the gist of the work of many authorities is quoted, the references enabling the original contributions to be consulted if fuller particulars on any point are required. Turn-



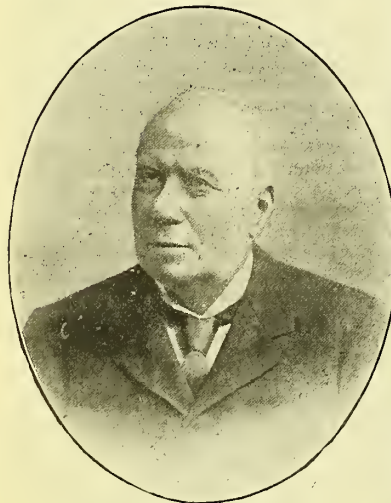
ing up cod-liver oil, for instance, we find half-a-dozen pages with a tabulation and condensation of the work of experts on this oil; Dowdard's method of detecting adulteration by means of the refractometer is noted, and also the untrustworthiness of colour-tests for cod-liver oil. The author will need to consult the recent volumes of *THE CHEMIST AND DRUGGIST* for further information on this subject. A feature of each section is a selection of the recent patents on a particular subject which puts the reader in possession of the newest information. The book is throughout of great interest; the chapters on candle and soap making, in particular, show the gradual development of these important industries, and the various devices used in the manufacturing processes.

## Personalities.

MR. CHARLES LEDGER, discoverer of the *Cinchona Ledgeriana*, is still living, at the age of eighty-five years, in Leichhardt, a suburb of Sydney, N.S.W. He still feels much interested in pharmacy, and looks forward to the arrival of the *C. & D.*

MR. JOHN CALDERWOOD, whose death was noted last week (page 390), was born in Edinburgh in 1840. After a brief period at a dame's school, he was sent about the year 1849 to George Square Academy, then a famous school under an equally famous headmaster (Mr. Brown). From George Square Academy he was transferred to the Edinburgh High School, where his elder brother (Henry) had preceded him, and after he had completed the curriculum there he became a student at Edinburgh University, his chemical studies being taken under Dr. George Wilson, who carried

on his classes in the Surgeons' Hall. After having completed his studies in Edinburgh, he proceeded to Germany to extend his acquaintance with scientific methods and research. On his return to this country he entered the laboratory of Dr. Angus Smith, of Manchester, and shortly afterwards was selected to fill the important post of research-chemist in the private laboratory at Bathgate of Mr. James Young, who was then



MR. JOHN CALDERWOOD.

engaged in perfecting old and in designing new methods for the production of the paraffin oils and products with which his name is indissolubly associated. In this way Mr. John Calderwood's attention became forcibly directed to the potentialities of the new business with which he was soon afterwards to be so intimately associated, and which, by the introduction of new processes and the invention of new plant and apparatus, he did so much to develop. Gradually, as the science of oil production and refining became better understood, Mr. Calderwood's attention was diverted from research to more practical operations, and when Mr. Young sold his business to a limited company (the present Paraffin, Light, and Mineral Oil Company, Limited), Mr. Calderwood's services were retained as chief chemist at Bathgate, and a few years later (about 1872) he was appointed manager of the extensive works which the company had erected and equipped at Addiewell. In September, 1880, he left the service of

Young's Company to enter that of Price's Patent Candle Company, of London, as assistant-manager, and in the spring of the year following he became general manager on the retirement of the late Mr. J. P. Wilson, who was a son of one of the founders of the firm. A few years later Mr. Calderwood was appointed the managing director when the business became the property of the present limited company. The success of the company under his management is well known, but he was not content to have achieved for his company commercial success, but was equally solicitous for the welfare of the workpeople in the factories at Battersea, London, and at Bromborough Pool, Cheshire. Besides encouraging and providing additional means of recreation and self-improvement for the workers, in all of which organisations he took an active as well as a sympathetic interest, he conceived, and was largely instrumental in perfecting, a scheme of old-age pensions whereby, on certain conditions, which are not onerous, those who have given to the company their best years of life and service are provided with retiring allowances at the close of their period of activity. Mr. Calderwood was approached at more than one period of his career with a view to his nomination as a candidate for parliamentary honours. But, although his tastes and his devotion to business, coupled with his retiring disposition, prohibited his acceptance of such an honour, he nevertheless gave of his valuable time and energy to the advocacy of the political principles which he held dear, and to the furtherance of many causes, educational, philanthropical, charitable, ecclesiastical, and others, in which his sympathies were enlisted.

## New Books.

Andrewes, F. W. *Lessons in Disinfection and Sterilisation* Cr. 8vo. 3s. net. (Churchill.)

Arends, Georg. *Neue Arzneimittel und Pharmaceutische Specialitäten.* 6½ × 4¼. Pp. 487+Index. 6m. (Berlin: J. Springer.)

Attfield, John. *Chemistry, General, Medical, and Pharmaceutical, including the Chemistry of the British Pharmacopœia.* Edited by Leonard Dobbin. 18th ed. 7½ × 4½. Pp. xx+854. 15s. (Gurney & Jackson.)

Cohen, E. *Physical Chemistry for Physicians and Biologists.* Trans. from German. 7½ × 4½. Pp. 352. 6s. net. (Bell.)

Elbs, K. *Electrolytic Preparations: Exercises for Use in the Laboratory by Chemists and Electro-Chemists.* Trans. by R. S. Hutton. 8¼ × 5½. Pp. 112. 4s. 6d. net. (E. Arnold.)

Furnell, J. *Student's Handbook of Paints, Colours, Oils, Varnishes.* 12 illus. 7½ × 4¼. Pp. 94. 2s. 6d. net. (Scott & G.)

Hageby, Lizzy Lindaf, and Schartau, Leisa K. *The Shambles of Science.* 8 × 5¼. Pp. 206. 1s. (Ernest Bell.)

Hewlett, R. T. *Serum-therapy, &c.* Cr. 8vo. 5s. net. (Churchill.)

Leeds, F. H., Butterfield, W. J. A. *Acetylene: Principles of its Generation and Use: Practical Handbook of Production, Purification, and Subsequent Treatment of Acetylene for Development of Light, Heat, Power.* 7½ × 5¼. Pp. 286. 5s. net (Griffin.)

McCaw, John, M.D., L.R.C.P. *Aids to the Feeding and Hygiene of Infants and Children.* Foolsap 8vo. Pp. 120. 2s. 6d. (London: Baillière, Tindall & Cox.)

Michelson, A. A. *Light-waves and their Uses.* 108 engravings and 3 coloured plates. 8vo. Pp. 164. 10s. net. (Wesley.)

Muter, J. *Short Manual of Analytical Chemistry, Qualitative and Quantitative, Inorganic and Organic.* 9th ed. 9¾ × 6¾. Pp. 250. 6s. net. (Simpkin.)

Noorden, C. von. *Obesity: Indications for Reduction-cures.* Part I. 8¼ × 5½. Pp. 60. 2s. 6d. net. (Simpkin.)

Russell, F. H. *Planning and Fitting-up of Chemical and Physical Laboratories, with Notes on Ventilation, Warming, and Lighting of Schools.* 8½ × 5½. Pp. 200. 7s. 6d. net. (Batsford.)

Smith, W. J. *Practical Guide to Surgical Bandaging and Dressings.* 4½ × 3½. Pp. 176. 2s. (Scientific Press.)

Webster, R. W., Koch, W. *Laboratory Manual of Physiological Chemistry.* 8vo. interl. Pp. 114. 6s. 6d. net. (Wesley.)